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Address.

OBSERVATIONS ON THE TEACHING OF CLINICAL MEDICINE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON PRACTICE OF MEDICINE AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS, MAY 5-8, 1903.

WILLIAM SYDNEY THAYER, M.D.

BALTIMORE.

A hundred years ago the young American republic bought from the French government that great tract of land of which the little frontier city of Nouvelle Orleans was the chief settlement. It is a happy chance that brings us together on the centennial anniversary of the Louisiana Purchase in this metropolis of the south.

One hundred years—a small space of time in the world's history, and yet what events have been crowded into this little period! A hundred years ago the country west of the Mississippi was a wilderness. To-day we meet, a national body, the majority, perhaps, of our members coming from what was then forest and prairie, inhabited only by savage and wild beast. And the young democracy, then all but unknown to the powerful empires of the east, has become the dominating factor in the markets of the civilized world.

In this amazing growth and expansion, in this tremendous accumulation of wealth and strength and power, it was scarcely to be expected that our contributions to science would keep pace with those of the Old World, where accumulated wealth, settled conditions and well equipped institutions of learning naturally tempt the studious and contemplative mind to problems of science and research. And yet, how many of the great discoveries and inventions of the century have come from this new country! In our own branch of learning the record is one of which we may well be proud. The discovery of anæsthesia, the demonstration by Holmes of the contagiousness of puerperal infection, the studies by the students of Louis on typhoid fever, the accomplishments of Bigelow and Sims and McDowell and, lastly, the noble work of Reed, Lazear, Carroll and Agramonte in Cuba and of those who have demonstrated to the world the practical value of their great discoveries — these are but a few examples of an honorable record.

And during this period what a change has come over the condition of medical education in this country! One hundred years ago there were three schools of medicine in America: the Department of Medicine of the College of Philadelphia, the first school of medicine in the United States; the Medical School of Harvard College, and the Dartmouth Medical School of Hanover, N. H. To-day there are over one hundred and fifty.

One hundred years ago only the most favored and fortunate were able to receive anything like a systematic medical training. Not that there were not educated physicians in America. There were in Carolina and New England, in New York and Virginia and Pennsylvania men who had profited by the inspiration and opportunities offered in the best schools of Europe. Many a young man, however, was obliged to begin his studies by "reading medicine" in the office of some older practitioner. His theoretical knowledge was gained from a few books, his main instruction came through the practical observation of disease, gained by assisting at the operations and visits of his preceptor.

In some of our early medical schools the requirements were, however, such as may well surprise those of us who consider the fact that within fifteen years medical schools in this country were giving a degree of doctor of medicine for one year's study. "Although," says Thatcher in 1828 (American Med. Biography, 80, Boston, 1828) "there is no uniform standard of attainment established in order for graduation, in most of our schools it is required that before a student can be admitted to an examination for a degree he must have attained to the age of 21, have studied three years with some regular physician, attended two full courses of lectures on the different branches of medicine, and, if he has not enjoyed the advantages of a college education, he must furnish satisfactory evidence of having made respectable classical attainments, and particularly that he has acquired a competent knowledge of the Latin and Greek languages, has studied mathematics, natural and experimental philosophy, geography and belles lettres. In several of our schools it is required that he shall have attended the clinical practice of some infirmary for a specified term. It is also required that before he can receive his degree he must pass a close examination in the different branches of medicine and write and defend a thesis on some medical subject."

The first schools of medicine were, for the most part, founded in connection with hospitals, and the actual study and observation of the patient was an important part of the student's curriculum. The multiplication of medical schools, however, proceeded with great rapidity. The number of students in some of these institutions was so great as to preclude the possibility that each individual should have sufficient practical experience from the amount of clinical material at hand, while in other instances schools giving the degree of doctor of medicine were established entirely independently of hospitals or infirmaries. Ten years ago the requirements for admission to many of these schools were almost *nil*. It was not uncommon to hear that this or that good

fellow whom one might have known but a day before as the driver of a horse car, had taken his degree in medicine. On investigation it might be found that for the past one or two years he had been attending evening classes, and at the end of this period had stepped from the platform of his car to the bedside of the patient with a degree attesting that he was a competent practitioner of medicine.

Within thirteen years I remember to have heard a colleague relate with pride that he had just accomplished in one year his whole course in medicine at a university with an old and honorable name, practically without clinical advantages. This is, to say no more, far from the ideals of our ancestors.

In the last few years, however, great changes have come into our methods of teaching. Four years' actual work in a medical institution are everywhere required. In our better schools anatomy, physiology, pathological anatomy, pharmacology are no longer taught as they used to be, by lectures to an untrained body of men. In many instances the student begins his medical studies with a training which has already taught him to think and investigate for himself; and our duty as teachers is coming to be rather that of guides and leaders than of simple lecturers.

The teacher to-day must be a student and investigator in his own line. The time is passing when the professor of anatomy or physiology can be a practitioner of medicine. His whole time must now be given to his studies and his teaching, and his immediate duties are not so much to lay facts before his students as to show the student how to find them out for himself.

And so it is in all these branches. The student in the laboratory sees, acts, controls, verifies. While of old he was expected and required to believe what was said to him, he is to-day taught rather to doubt that for which he can not obtain proof. And in like manner throughout the greater part of the course the didactic lecture is passing—such matters the student can read—and is being replaced by practical anatomical, physiological, pathological, pharmacological, experiment and experience. The same methods have come into the teaching of physical diagnosis in its restricted sense, as well as of minor surgery—lectures and demonstrations have largely given way to practical experience in small sections. In some of our schools the teaching in these branches compares with the best that can be found in the world.

But when we arrive at the last stage, the study of pathological physiology in the individual, the observation and care and treatment of the patient, we find, strangely enough, that the advances which have been made in our methods of instruction have not kept pace with those in the other branches. If there be one opportunity in the course of the study of medicine which it would seem most necessary for us to provide for our students, it should be the privilege of watching and studying at the bedside those diseases which they are most likely to meet with in practice. It was the first necessity recognized by our ancestors; it is the first necessity that would be appreciated by any non-medical man; and yet I believe that any one who investigates the matter will realize that it is one of the weakest points to-day in our American system of medical education.

What actual clinical experience does the average medical school of this country offer?

The clinical instruction offered in most of the better schools in this country consists in:

1. Exercises in physical diagnosis proper, which may include good practical work in small sections, but which commonly consist more of lectures and demonstrations than practice and experience.

2. Clinical lectures in which but few, if any, of the class approach the patient.

3. Ward visits which are too often infrequent.

4. Exercises in which students report individually on cases which have been assigned to them for study.

The requirement of a continuous service of students as assistants in hospital wards is almost unknown in this country.

The student who has graduated from such a school may, and often does, leave the institution with a fairly good training in methods of purely physical diagnosis. But how few of us in this room at the time we left the medical school, had ever followed a case of typhoid fever, pneumonia, measles or scarlet fever from beginning to end. And yet there is but one way by which one can learn to recognize and treat these diseases—and that is by bedside experience. Clinics, occasional visits, books and lectures, these weigh but little in the balance. If, as would seem to be the case, the medical records of our late war with Spain reveal a strange lack of familiarity on the part of many physicians with such important diseases as malarial and typhoid fevers, this is due largely to the failure of our medical schools to offer them the necessary bedside experience in the course of their early training.

And again, how few of us as students ever had brought practically before us the vital questions of when and how to administer stimulants in acute infectious diseases; whether, in any given emergency, those drugs should be given which raise or depress the blood pressure. But these are matters which may mean the life or death of the patient, and it is a sad fact that nothing is more common than the administration of nitroglycerin in conditions of profound vasomotor collapse by conscientious men who have missed in their education just that which early and well-directed clinical observation and experience might have brought them. This defect in our medical teaching is further emphasized when we compare the curriculum in most of our schools with that which is required in England and France. In London and Edinburgh, for instance, schools require of a student at least six months' service as a clinical clerk in the medical wards and a similar length of time as a dresser in the surgical department of the hospital. In Paris the student is required to give his whole morning to ward work of this nature for two years—one year in medicine, one in surgery.

That it is desirable that we in America should offer in our schools and require for our license to practice an amount of practical experience equal to that required in Europe is obvious.

Of the necessity for such requirements if we wish to keep pace with the progress of the world and properly educate our medical men there can be no question.

Of their practicability there can also be no doubt when we consider that such methods have been in force for many years in a country where individual liberties are as jealously guarded as they are in England.

Why is it, then, that so serious a defect exists?

The reasons are various and not altogether simple. The more important would seem to be:

1. The absence of state or national laws requiring such work.

2. The multiplicity of medical schools and the existence of many such institutions unconnected with hos-

pitals of sufficient size to furnish material for the instruction of the students.

3. A wide-spread prejudice existing in many hospitals against the admission of students to the wards and against the use of patients in general for purposes of instruction.

1. The first of these reasons is, of course, the most important. Until the states require such experience for a license to practice there will always be schools which will give a degree for less work. It is for us individually as physicians and collectively as we are associated in teaching bodies to strive to raise the standard and to hasten the day when such requirements are put in force.

2. It is the absence of these requirements which is, in great part, responsible for the multiplicity and inferior quality of some of our medical schools. With proper state regulations institutions unable to offer the requisite amount of bedside experience would of necessity go out of existence. The hospital is the most important part of a school of medicine, and that school which does not own or, to some extent, control a hospital sufficiently large to furnish practical experience for its students is not only incomplete, it is a pernicious and dangerous institution. It is greatly to be hoped that state or national laws, as well as the force of enlightened public opinion, may soon remedy the evils caused by the existence of such establishments.

3. As a matter of fact, however, most even of our larger and better supplied institutions do not, as they should, own or wholly control the hospitals on which they depend for clinical material, and the vague fear that the admission of students to the wards may prove prejudicial to the interests of patients or institution deprives these schools of an enormous amount of valuable material. That this fear is wholly without foundation is a fact which is clear enough to any one who has had experience with active ward teaching. But there is another side of the question, to which attention has recently been called by Dr. Osler,* which is of very great importance to the hospitals themselves. The duties of the house physician with the recent advances in methods of precision in diagnosis and study of disease in ward and laboratory, have in latter years increased to a degree that demands outside assistance if the patient is to be properly studied, properly watched, properly treated. Much of this work can be done better by advanced students than by any other class of assistants. To assign three or four advanced students as clinical clerks to a ward of twenty-five or thirty patients, letting each student be responsible for the history, the examination of the secretions, the general observation of four or five patients, under the control of the ward physician, is to give the physician invaluable assistance in the keeping of records, in accuracy of observation, in the detection of many points in the progress of the disease, points which may be, and often are, of vital importance to the patient. The admission of students to the wards of hospitals in this capacity is not only without harm to the patient but is of the greatest practical value. That the careful study of each case resulting from such a system is, moreover, without annoyance to the patient I can testify from my experience of the past thirteen years in Professor Osler's wards, in which I have seen the direct transition from one system to another. To the student this experience is invaluable, and it seems to me to be absolutely necessary, if the degree of doctor of medicine is supposed to represent a qualification for practice.

Such experience, however, is of limited value unless it be associated with frequent and careful ward visits from the instructor. And these visits make considerable demands on his time. Teaching, direction of the research work of the department, the study of the material afforded by the clinic, these should be the main duties of the professor of medicine—duties incompatible with other than a purely consulting practice. To make this possible our universities must recognize the fact that the professorship of medicine as well as the professorship of anatomy, should be properly endowed. Only by the adoption of some such system as this can we hope to bring our instruction in the practice of medicine to the level of that which is given in Europe.

For proper ward teaching the clinic must be so organized that the professor shall have several regularly appointed assistants, who shall take part in the investigation and instruction going on in the department. This is desirable, not only for the instruction of the students, but for the education of teachers. If we are to approach the infinite number of problems in pathological physiology which come before us every day in the observation of disease in anything like the manner in which such problems in normal physiology are studied in the laboratory, we must have a regular staff of assistants. No laboratory of physiology, for instance, could accomplish scientific work if the entire staff consisted of the professor and a number of young internes appointed annually from the graduating class. It is only through the opportunities offered by such positions that younger men are enabled to acquire that experience which fits them for the task of teaching.

The problems involved in the study and teaching of clinical medicine differ in no essential from those connected with the study and teaching of physiology, and until we recognize this fact and meet it squarely our clinics will remain unproductive and our teaching inadequate.

The most serious impediment in the way of advance in our methods of clinical study and teaching is the wide-spread institution of rotating services in our hospitals. In no service where the head of the department changes every three or four months can really valuable investigation be accomplished. And the best instruction can not be given to students in wards presided over only by a visiting physician and young, annually appointed, assistants. A permanent service, even though it be small, and a fixed staff of assistants offer incalculably greater advantages for study and research and teaching.

It is, of course, evident that instruction of this sort in larger schools can not be given in one clinic or by one man. The day must come when every well equipped hospital shall be at the same time a laboratory for the study and teaching of clinical medicine, offering the clinical advantages required by the central university or by state regulation. Every physician or surgeon holding an appointment at a large hospital or out-patient department should be encouraged to teach.

The hospital will gain by the supply of the best trained assistants and by the education of the staff, for there is no training so good as that of teaching, and there are no such spurs to work and progress as the questions and suggestions of the enthusiastic student.

The student will gain, in a few months, experience which it might require years to accumulate after graduation, and he will acquire that experience, as I have said

* Med. News, N. Y., 1903, lxxxii. 49.

elsewhere, at a time when he is free from the prejudices and preconceived ideas which are sure to obscure the judgment of the man who has gained his medical experience second hand from books or lectures.

The general public will gain the simple protection which any civilized government owes its citizens.

In this very city there are opportunities such as exist in scarcely any other community of this country for the realization of our ideals in medical instruction—a city of over 300,000 inhabitants, a fine old hospital of nearly 900 beds, a single school connected with a university of honorable past and most promising future. Tulane University has been a leader in this branch of medical education, but it can do more. The university can still offer to the hospital and the hospital to the university that which might make New Orleans the model for the rest of the country.

Original Articles.

THE BOY'S VENEREAL PERIL.*

[The author believes that the objects of this paper will be furthered by substituting initials for his name and by omitting his address in reprints thereof.]

FERD. C. VALENTINE, M.D.
NEW YORK.

I. INTRODUCTORY.

Many important books have been written and many valuable papers contributed to medical journals on the dangers of venereal diseases. All show that venereal diseases are more perilous to the individual, the family and the state than are all other ailments combined.

Study and effort directed to their abatement lead to the inevitable conclusion that venereal diseases are due essentially to prostitution, clandestine and public. The knowledge that venereal diseases are due mainly to prostitution does not, however, reveal the means of curing the evil: 1, Because all efforts to reduce public prostitution have proven and are always likely to prove futile; 2, because clandestine prostitution is necessarily beyond all efforts to limit its still greater power for evil.

The principal cause for the physical and moral wrecks produced by prostitution lies in ignorance. The same ignorance misleads many of the victims of prostitution to regard lightly the ailments thereby acquired.

The need for public enlightenment being manifest, many earnest men, I among them, have advocated lectures to the people on these subjects. More mature thought has, however, brought the conclusion that such lectures would fall short of their purpose, principally because, to be effective, instruction must be given at the opportune moment. A state of receptivity dependent on a condition so individual as mental, physical and sexual puberty must necessarily, in any assemblage, form as varying a factor as there are people present.

Obviously the effective teaching of these matters can be done only in private. It would seem at first glance that this is the father's duty. But some, indeed many men are so far removed psychologically from those nearest them that they could never successfully undertake this delicate task. Such men must relegate the duty to the physician, the teacher or the clergyman.

Among teachers and clergymen many have vague, and often gravely erroneous ideas on these subjects. Indeed, a majority of them has not received even rudimentary education on the structure and functions of the genito-urinary organs. They consequently have no knowledge whatever of the diseases due mainly to misuse of the genesic function.

If, for the reasons given, the father, clergyman or teacher is disqualified from imparting the necessary warnings, it may be well to direct the youth to study the third, fourth and fifth divisions of this paper.

II. THE DANGERS OF VENEREAL DISEASES.

In occasional contributions to our medical journals one eminent man or another asserts that the exercise of the sexual act is unnecessary for the preservation of health. As far as I know this has not been refuted. One reason for this silence may be, and probably is, that such refutation would be more likely to be read than were the articles contested. They would, as all such things do, fall into the hands for which they are least intended and be perverted to serve as scientific endorsement for libertinage and profligacy.

Wiser and deeper students may, in the course of time, establish whether illicit relations between the sexes is ever a vital necessity. For the present it suffices to say that young men are everywhere beset by temptations and induced by the spirit of evil, by the jests of their companions and by the solicitations of mainly clandestine offenders to seek sexual gratification, the desire for which is thus awakened.

The present purpose would not be advanced by a discussion of the need of sexual gratification for the maintenance of health. Moreover, the subject seems too individual for generalization and therefore not capable of wide application.

So much, however, experience shows, that no matter what volumes may be written on the wisdom of male sexual purity, whatever the endeavors of moralists, there will be, as there always has been, a vast majority who disregard precepts which oppose their desires. In consequence there is, as there always has been and will be, an overpowering multitude of men who acquire venereal diseases to the detriment of themselves, their families and the state.

To what extent this detriment goes is incalculable, as statistics on the subject can not be reliable. It will suffice here to note that conservative authors estimate that one-eighth of all the patients in the hospitals of New York are inmates thereof because of venereal diseases or their consequences.[1]

Those in hospitals represent but a small fraction of the people attainted. The latest study of the question[2] made by a body of physicians appointed by the New York County Medical Society for the purpose, makes the appalling declaration that 200,000 people infected with venereal diseases are walking the streets of our city.

The working and consequently earning power of these people is materially reduced. If every infected person loses only $1 per day, then the loss of earnings from this cause alone amounts to *sixty million dollars* per year. This loss is directly or indirectly borne by all, even those who are so inexpressibly selfish as to have no feeling for the sufferings of others.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

1. Specific mention of the works of such eminent writers as Morrow, Sturgis, Tarnowsky and others, is intentionally omitted here because they are well known to the medical profession. Laymen who may desire further information on these subjects, can easily obtain from their physicians the titles of the best works that treat of them.

2. Morrow: Report of the Committee of Seven on the Prophylaxis of Venereal Diseases in New York City. Medical News, No. 25, 1901.

The heaviest part of the burden rests on physicians, who must give their services gratuitously to over 66 per cent. of their patients. But they do not complain of their unrecognized philanthropy, nor do they advertise it. They exercise it as the most important part of their priesthood.

Men who devote their lives to the relief of misfortunes which bring the deepest woes, are daily astounded at the consummate ignorance that prevails among all classes regarding what is, from the nature of things, a generally tabooed subject. It is not only the uncultured, uneducated man who is the victim of unbridled passions; his cultured, educated and intellectual brother is equally and just as frequently unfortunate. There is no excessive charity in here using the word "unfortunate," for he is truly unfortunate and it avails nothing to consider him otherwise; nor is there any excessive optimism in the conviction that if all men could be informed of the dangers of venereal diseases, fewer would contract them, or having contracted them would neglect them as they now do.

Honest endeavors are continually made, especially by physicians, to enlighten the public on this subject. But their excellent counsel must ordinarily be limited to persons who have already acquired the disease, and for whom the topic has at the time absorbing interest.

The ignorance that prevails on these subjects is far-reaching in its effects. The patient, uninformed of the dangers to his health and life, generally does not seek early and radical treatment for the infection. More frequently still, associating venereal diseases with the only mention of them that has come to his notice, namely, in the advertisements of quacks, he consults one of these harpies or their congeners, the patent-medicine dealers. Later on, and often too late, he learns that every community has conscientious practitioners who scientifically study these diseases. Only then does he discover that he has wasted time, injured his health and imperiled his life through his ignorance and the shamelessness of those who have taken advantage thereof.

As little as the patient knows of the dangers to himself of venereal diseases, so little is he aware of the menace to his family. He should know at least two facts, which in efforts laid before the profession were elsewhere discussed. These facts are:

1. That of all women who die of diseases of the reproductive organs, 80 per cent. are victims of gonorrhea, of which their husbands imagined themselves cured.

2. That of all children born with seeing eyes who became hopelessly blind within a few days after birth, 80 per cent. lost their sight because of infection by gonorrhea, of which the fathers imagined themselves cured. (This paragraph refers to the time before the Credé method of protecting children's eyes at birth was employed.)

The patient is, as a rule, as ignorant of these frequent results as he is of the danger which venereal diseases are to the community. The need, therefore, of instructing the people at large on these subjects is manifest. As said before, however, the knowledge usually is imparted after the damage is done.

Many physicians, I among them, have striven to aid in combating this most dangerous ignorance. Although the papers written were received in a most cordial and kindly fashion, they could not meet the fundamental defect which prevails, that of preliminary education in those whom physicians must instruct. This shortcoming was made painfully apparent by letters from practitioners in all parts of the country.

Manifestly, then, there is need for explanation to the young which will appeal to them at the most susceptible age, that of puberty. To meet these evident requirements I have, at various times, attempted to construct an essay that would serve the ends in view. But at almost every line I was confronted by the dread that, by the very writings, the youthful mind might be directed to temptations that might not otherwise come to it.

It was my fortune, at the second conference for the Prophylaxis of Venereal Diseases, held at Brussels early in September, 1902, to receive a copy of Professor Fournier's article addressed "To Our Sons When They Have Reached Their Eighteenth Year." This admirable paper, written temperately, with much wisdom and great tact, indubitably meets the requirements of the sons of intellectual people. The temptation at once presented itself to translate Professor Fournier's paper, but throughout it is permeated with the spirit which makes it so eminently acceptable to the French line of thought. It would not apply as well in our own country, where the Anglo-Saxon manner of thinking and living predominates. Appreciating the need of a similar effort it is now attempted in the hope that better pens will take up the matter for the benefit of the rising generation.

The proposition, as suggested before, involves the problem, at what period of the young man's life this information should be imparted to him. Those closest to him must be the judges of the opportune moment.

The remainder of this paper consists of:

1. The evidences of awakening genesic tendency.

2. Masturbation and the impulses or defects that lead thereto.

3. The evil influences that mislead youths into immorality.

4. Prostitution, public and clandestine, and the mental and physical destruction they bring.

5. Gonorrhea, chancroid, chancre, and their sequelæ.

6. Advertising quacks, nostrum venders and an exposé of the methods they employ to swindle those afflicted with real or imaginary genitourinary and other ailments.

7. The reasons why a youth with a real or fancied illness due to immorality should consult a physician whom he knows, or whom his father knows.

8. The reason why reputable practitioners do not advertise.

These matters, being addressed to boys, are necessarily presented in such elementary outline and puerile language that they have no place in a scientific publication. The author therefore requests their omission here, but for completeness will add them to the reprints of this article, which will be furnished to physicians on request to that effect.

31 West Sixty-first Street.

DISCUSSION.

DR. JAMES J. WALSH, New York—The great universities of Europe, especially those in Berlin, have deliberated on this question, and the students are taught what is meant by venereal diseases and what their significance is. This is certainly not a pleasing question for deliberation, but it is an exceedingly important one. At the University of Berlin a course on the significance of venereal disease, open to all the students, is supported out of the emperor's purse, and is very largely attended, thousands of young men attending such lectures. The time must come, and shortly, too, in America when the universities do something to protect the students and give them this much-needed knowledge. At the present time all

the universities are necessarily situated in the large cities, and the young men from the country are invited to come to the city, where they meet with the dangers of city life. I think it is our duty to give these young men such knowledge as will protect them against the physical evils of venereal diseases. Faculties which do not make some provision for this are neglecting a serious duty. Any objections to such a course being instituted in our universities are founded on pusillanimous prudery.

DR. F. W. ROBBINS, Detroit—I think the paper is written in a strong style and will impress the readers. I think that mental impression is of more importance to the youth than the mere knowledge. It seems to me that the period of life at which the intelligent young are instructed in these matters is, in most respects, too late. There are two periods in the boy's life when he should be impressed with this knowledge: 1. The early period, which comes at the ninth or twelfth year. Children at this period can scarcely be expected to be much impressed with such a paper in which there is so much discussion. Then it is that the boy more particularly requires the attention of the father and not of the physician. 2. At a later period, when the boy goes to school, he should be given this knowledge. I believe it is an injustice to allow these boys to go without this precious knowledge. I think it is not so much the knowledge as the mental impression which keeps these boys moral.

DR. DELANCEY ROCHESTER, Buffalo—I am particularly interested in Dr. Valentine's paper because twelve or fifteen years ago I presented a paper on a similar subject before the American Academy of Medicine. I believe the proper time for giving such instruction to these boys is during the high-school period, and the best way of imparting this knowledge is by the proper teaching of physiology in the schools by physicians. The whole subject of physiology should be taught and not—as at present—only part, and that imperfectly. The truth should be taught; and that is that there are two great functions of the organism, namely, the preservation of the individual and the perpetuation of the race; that the functions of the various organs of the body are subsidiary to one or other of these great functions.

A thoroughly careful and competent teacher could show by the history of the complete separation of the sexes in plant and animal life that there has been developed the most beautiful in flowers and the noblest in animals. Time does not permit me to elaborate the scheme, but I thoroughly believe that physiology taught in this way would arouse in each one a noble respect for the human body in all its parts and a determination to do all in his power to develop a perfect human being and to keep it pure and holy. I believe that by careful selection of teachers physiology could thus be taught in the public schools.

DR. THEODORE POTTER, Indianapolis—My experience has led me to somewhat the same conclusions as Dr. Valentine has reached. There are two periods in the boy's life when such instruction can be given: 1. At the time of puberty, when the boy is at home under the influence and control of his parents and family physician; 2, when he goes to school or college. At this latter period he will look on such instruction as may be given him in a serious way. If I am allowed to differ with the last gentleman who spoke, I must say that I question whether the public school or the intermediate school will give the proper opportunity for giving such instruction, because the boy is more or less immature at that time and looks on such teaching as frivolous and makes a joke of it. Later he will listen and take it in a more serious way. When attempts have been made by public school teachers to instruct the boys in this country they take it as a sort of joke; but this is not so among the college students. It really is surprising what a great amount of ignorance is displayed by those young men who are entering or who have gone through college. I have had experiences in the west as well as the east in institutions, and I have seen the most lamentable examples of young men, not bad men at all, who have gotten into trouble largely through ignorance. This is the point: The young man goes free for the first time when he enters college and, since human nature is imperfect, when he reaches this time of freedom something goes wrong and it is largely through lack of proper instruction. I believe Dr. Valentine is right when he states that when the young men attend college, reaching the age of maturity, then is the time that serious instruction should be given.

It has been my habit, and this I think should be done by the physicians all over the country, to say to my patrons who have boys, that I am going to talk to a few boys at my house and if they wish they may send their sons. Invariably I have met with a willing response, and I know that my efforts have been crowned with success, so far as instructing them is concerned.

DR. M. M. SMITH, Austin, Texas—I desire to lay special stress on the influence exerted by the home circle in the prevention of venereal diseases in young men. During the earlier years of the boy's life he is constantly with the mother and if she is careful of his conduct and associates and watches him carefully and teaches him obedience and morality during these years, instead of spending much of her time at card parties or other amusements, when the boy runs loose about the streets during her absence, he will show the value of this watchfulness in his character. Equally important is the duty of the father, and especially is this true when the boy reaches the age of puberty. This is the time the father should be his companion and friend, and especially watch his conduct and companions and guide him safely over these few years when he is developing into complete manhood. A little denial of lodge meetings or the absence from clubs or other social functions will result beneficially to the boy's welfare in life. It is too often the case that the parents are earnestly at work to further some charitable and noble enterprise in that public-spirited manner; but at the same time they are neglecting their own children at a time when their influence will leave its effects all through their lives. The subject should engage the attention of the parent, the teacher and the physician; in fact, on the proper solution of the subject depends the future welfare of the nation.

DR. FRANK A. JONES, Memphis, Tenn.—I doubt very much the propriety of bringing this matter before the laity as advocated. By doing so there will be a tendency for the boy of young age, who is disposed to look further into such matters, to investigate further with disastrous results. We meet sexual neurasthenia which is purely an imaginative condition; many come to us with trivial affections and even talk of suicide, and this may be the result of publicity being given to such matters. I do not think this subject should be placed before the public. Try and enjoin on the young men this, that the way of the transgressor is hard. I think the young men can be reached better through the medical profession than through the public press or other means of publicity. I think it would be wise to distribute Dr. Valentine's article by the thousands to various physicians in the American Medical Association.

DR. E. L. STEPHENS, Des Moines—Before the boy reaches the age of puberty I think he should be taught the sacredness and naturalness of the sexual instinct, and this can be done in a quiet way. There has been published a book, "Almost Fourteen," by Mortimer Warren, which I think is most suitable to place in the hands of young men, and the only one that I have been able to find after nearly forty years' search. That is, I believe, the only one that can be safely placed in the hands of young men as being scientific and pure. Since the American Medical Association has been reorganized we now have a means whereby we can legitimately place such information before the public; previously it could only be done by quacks. Now each councilor in each district has the privilege of using the public press for disseminating proper information. Why not take this opportunity for exercising this point? I would not think it proper, nor would I advocate placing posters in water closets, etc., but we can present through the public press the right ideas and the right information which would offset the wrong impressions given the laity by charlatans and quacks.

DR. WALTER SHROPSHIRE, Yoakum, Texas—I think that if anything is to be accomplished toward protecting the young

of this country it should be done at a time when it would be effective. When the boy reaches college it then is too late. If we should wait until some definite period we should select that period when such instruction would be most efficient and that is concomitant with the development of the sexual function in the boy. When he first learns of this function he should be taught the dangers of its misuse. I really believe that physicians should teach physiology in the public schools and, at the same time, they should teach regarding the sexual function and the dangers which its abuse entail.

DR. FERD. C. VALENTINE, New York—Naturally it was impossible in the brief synopsis which I presented to cover the entire ground; that has been largely done by the gentlemen who so kindly discussed my effort.

With regard to Dr. Walsh's remarks, I may say that the universities in Germany, beginning in Berlin with Lassar, have given instructions to students regarding the dangers, etc., of venereal diseases. Lectures are delivered to students of all the departments of the university. The brilliant success of Lassar was so encouraging that it caused an increase in the number of such lectures, with exceedingly good results. But you may ask how many of those young men who came there to be educated and were instructed in venereal diseases had not unfortunately educated themselves. In Berlin the war is directed against the repetition of contracting such diseases, as well as instructing regarding their nature and results. I agree with Dr. Walsh, that some method should be introduced in this country to teach the young men the evils of venereal diseases. I wish to emphasize his remarks and say that university students who attend these lectures derive much benefit at the time when they certainly are qualified to receive such instruction.

What Dr. Robbins says regarding the time for receiving such instruction is undoubtedly correct, but he says it is not so much knowledge but impression which is of value, and that they should be taught at an impressionable age. But what is that age? That varies with the individual. There are some boys who are impressionable at the age of 12. I am now treating one not quite 14 years old, who has a gonorrheal prostatitis. This boy is the only son, in a good family, and has been correctly raised. With six others he was solicited by a girl of 14; all six contracted gonorrhea. Had he been instructed at the period when he was of the impressionable age his misfortune might have been averted.

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FAT NECROSIS OF THE KIDNEY.*

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DUBUQUE, IOWA.

When we consider the rather superficial location of the kidney, its importance and the various pathologic changes to which it is liable, it is strange that for so long a time it eluded careful examination and escaped the surgeon's knife. In the past five years, however, the surgeon has made determined, successful efforts to make good that deficit.

Fat necrosis in the tissues of the body is neither a new process nor a new discovery. It has long been recognized in the several tissues of the human body, notably in the abdomen, in the abdominal walls, in the subperitoneal fat, in omental structure and in the pancreas. For a long time it was supposed to be due to some form of pancreatic disease, but it is now well known to occur independently of any affection of that organ. The accepted physiologic view is that fat may be formed in both animal and vegetable bodies from albuminoid matters. Proteids break up in the body into nitrogenous and non-nitrogenous compounds. This is demonstrated in the human subject and by experiments on the lower animals. The non-nitrogenous compounds not being completely oxidized in the cells are formed into fat. The process actually occurs wherever fatty substitution takes place in the animal cell. Hoppe-Seyler takes the view that fat is not directly formed from albumin, but that glycogen is first formed and that fat is a resultant product. Volt's view, and the one generally accepted, is that fat is formed directly from proteid material. Graham Lusk,[1] after quoting various experiments along this same line, concludes, "It seems rational that in acute fatty metamorphosis of the cell that dextrose found may be quantitatively converted into fat."

The physiologic fact, I think, as well as the chemical changes underlying it, are reasonably well understood and generally accepted, but the etiologic factors, active and predisposing, are by no means clearly settled. Fat necrosis, as the term is employed in this paper, denotes a type of necrosis to which certain tissues are liable, separate and distinct from fatty degeneration. It presupposes the fact of fatty degeneration and, subsequently, a necrosis forming of the entire structure of fatty emulsion.

According to Stengel, there are a few microbes which form emulsifying ferments, which may cause this fatty emulsion. The term "liquefaction necrosis" probably better conveys the correct meaning. Ziegler says, "A liquefaction necrosis may occur in the tissues where the cell wall becomes dissolved in the fluid present in the part." "Fatty degeneration may so terminate," says this distinguished authority. Bacteria is said by some observers to be concerned in this change. The part played by these organisms is still under investigation. Dörsch says, "The cortex of the organ is most frequently involved, though the medullary portion is frequently affected in a minor degree." Hektoen considers this condition due usually to the escape of the fat-splitting ferment, resulting in the formation of fatty acids and lime salts. Gaylord states that fat in the kidneys occupies the space between the lobules in the connective tissue.

There are many causes assigned for the formation of a fat necrosis in the tissue, either with or without liquefaction:

1. Changes in the supply and composition of the blood.
2. Diminished oxygen.
3. Blood diseases.
4. Narrowing of the arteries supplying the part. (Narrowing of the blood vessels of the heart leads to fatty degeneration, according to Hektoen.) Fatty degeneration of the kidney in pregnancy is due to disturbed circulation, says Stengel.
5. Persistent venous congestion. Displacement of the kidney producing, as it certainly does, changed blood supply, diminished oxygen, torsion of the renal artery and, together with a constant venous congestion, is a sufficient cause for liquefaction necrosis of the organ.

In the literature which I have been able to examine the references to this subject have been sparse indeed. A case is reported by Dr. T. Charlewood Turner[2] of a girl 13 years old who died of pericarditis. The autopsy revealed a fatty kidney, and he described a necrosis with softening and, though it is not distinctly stated that the necrosis affected the fatty tissue, yet from the present light I think this a fair presumption, that the

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

1. Report before the American Physiological Society, Boston, Tenth Annual Meeting.
2. Transactions Pathological Society of London, 1886.

softening was due to a liquefaction necrosis in the fatty substance.

Dr. Ephraim Cutter,[3] New York, contends that many organs of the body are subject to fatty substitution, and that necrosis of this fat is often present.

E. W. Cushing[4] describes the case of a patient who passed urine, one-fifth of which was oil, several days before death, and that among other things the post-mortem examination revealed a necrosis of fat about the kidney, producing oil which escaped with the urine.

Thomas Oliver[5] reports, from his private practice, two cases of oil in the urine. He asserts that there was present in these cases a fat formation and a tendency for molecules of fat to form into globules, which, by solution of the cell wall, made their escape into the pelvis of the kidney. There is evidence enough to establish the possibility of oil formation in the structure of the kidney itself. Newbaur, in his work on the urine, speaks of the rare appearance of this constituent in the excretion derived from the kidney from this fatty substance. Fat globules are held in solution by the albumin present. Roberts, in his work on urine and urinary disease, may also be quoted to the same purpose.

It is believed, therefore, that a liquefaction fat necrosis is possible in the substance of the kidney; that a dislocation of the kidney may form the active cause for this change, and that the case briefly described below falls under this category.

April 23, 1902, I was consulted by Miss M. D., aged 22, of Welsh parentage, with unexceptional family history and personal history, free from disease, except some slight illness in childhood. She gave a history of a tumor-like mass, discovered by her about one year before, in the left hypochondriac region, extending down to two inches above the umbilicus. The November previous she consulted her physician, who found the enlargement, which he described at that time as freely movable, and made a thorough examination of the patient, with a negative result, except that he found general loss of strength and great languor. Her symptoms remained practically unchanged, except increased weakness, which led her to seek further assistance. She entered the hospital on the afternoon of April 23, and the examination which I made the following day resulted negatively, except that there was an accelerated, weakened condition of the pulse, and a tumor located as above described. The tumor seemed to be nearly one-half larger than the normal kidney, and by pressure could be returned nearly to the normal kidney location.

April 25, a lumbar kidney incision was made in the usual manner, and the kidney brought up into the wound and the fibrous capsule grasped by a clamp. The capsule gave way and there was discharged from the kidney a yellowish semifluid substance to the amount of 12 to 14 oz., and resembling in color an emulsion of cod liver oil and iodoform, containing a peculiar flaky or shredded material. By digital examination I found that, practically, the whole kidney substance had been destroyed. I stitched the kidney into the wound, leaving free and unobstructed drainage. Some of this semifluid material drained from the kidney for several days. Some of the material saved in the test tubes I submitted to Dr. Geo. Mengis, Dubuque, Iowa, for chemical and microscopic examination, and he reported the material composed almost entirely of an emulsion containing oil, fatty cells, together with fibrous and connective tissue. A fatty substitution had taken place in the kidney, followed by liquefaction necrosis, which had, practically, destroyed its secreting structure.

It is believed that this girl primarily suffered from a floating kidney, which, by torsion of the renal artery, produced the pathologic changes described. The recovery following the operation was uneventful, with the exception that for three or four months she suffered from weakness and rapidity of the heart's action.

In a letter received not long since from her physician, Dr. C. W. McLaughlin, Washington, Iowa, I learn that she has completely recovered. The sound kidney seems to be doing well the work of elimination.

3. Paper before Mississippi Valley Medical Association, published in Medical Age, Detroit, Oct., 1895.
4. Paper before Boston Society for Medical Observation, published in Boston Med. and Surg. Jour., May 17, 1881.
5. British Med. Jour., Dec. 27, 1879.

SURGICAL TREATMENT OF NEPHRITIS.*

ALEXANDER HUGH FERGUSON, M.D.
CHICAGO.

"The Surgical Treatment of Nephritis or Bright's Disease" was the title of a paper published by me March 11, 1899, in THE JOURNAL of the American Medical Association. This is the first announcement that has ever appeared recommending a surgical treatment for Bright's disease. The date of this publication has been overlooked by Dr. G. M. Edebohls in all his articles. Dr. Edebohls' first paper, entitled "Chronic Nephritis Affecting a Movable Kidney as an Indication for Nephropexy," appeared in the *Medical News*, New York, April 22, 1899, one month and eleven days after my first article.

Feb. 10, 1899, a symposium on nephritis was the program of the Chicago Academy of Medicine, and the surgical treatment was assigned to me. At this meeting I related two cases of interstitial nephritis symptomatically cured by *decapsulation and multiple punctures*. I removed a portion of the kidney in each case, which was pathologically reported on by Drs. Klebs and Zeit, and they pronounced it interstitial nephritis. In these two instances no positive diagnosis was made before operating.

At that meeting I related several earlier cases, but inasmuch as I had not examined a section of kidney tissue microscopically in any of them, I thought it wise not to publish anything but the two cases in which that was done. Dr. R. B. Preble, while denouncing splitting of the capsule, etc., as dangerous and useless, terminated his remarks as follows:[1]

While Dr. Ferguson's paper was interesting, still the bulk of the cases do not apply to nephritis at all (claiming that my diagnoses were in error), and the latter cases which were demonstrated to be nephritis have not recovered from their nephritis, but have been relieved of a purely subjective symptom.

Time has proven him to be wrong.

HISTORY.

In 1902 an article from the pen of Guiteras,[2] on the "Surgical Treatment of Bright's Disease," gave an excellent historic review of work leading up to this subject. He, too, overlooked my first publication, March 11, 1899. He gives the more recent developments, and has added three cases operated on by himself. It is my intention in this short paper to briefly give the evolution of the surgical treatment of nephritis, and add a few more cases of this disease treated surgically.

Reginald Harrison made a mistaken diagnosis in three kidney cases (1878, 1887 and 1893) of an abscess in one and stone in the other two. He cut down on them and found acute nephritis instead. It was fortunate for his patients that he and his associates were in error,

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

1. THE JOURNAL A. M. A., March 11, 1899.
2. New York Medical Journal, May 17, 1902.

for the operation cured them, and let me ask if in these cases a diagnosis of acute nephritis had then been made, would the knife have been recommended? I think not!

Newman (1896) observed in two cases the beneficial influences fixation of the kidney had on albuminuria. In 1899 Tiffany successfully incised the capsule and parenchyma of a kidney affected with chronic nephritis, complicated with nephralgia. In 1886, Péan removed a kidney for nephralgia and chronic nephritis.

In October, 1899, Pousson collected 25 cases and added 2 of his own; of hematuric nephritis, 10 cases; nephritis with nephralgia, 2 cases; subacute infectious nephritis, 4 cases; acute infectious nephritis, 9 cases. The kidney was removed in 11 of these, opened in 13, and 1 exploration, with 21 reported cured. These operations mentioned by Pousson included those of Harrison, Weir and Israel, and were undertaken, not with the object of curing Bright's disease, acute or chronic, but for some suspected surgical condition, such as abscess, tumor, stone, etc.

In 1899 Israel reported 14 cases of hematuria and nephralgia treated by nephrotomy. In 12 of these there was evidence of chronic nephritis. It must be remembered that Israel did not aim at a surgical treatment for Bright's disease, and recommended an operation only when there was hematuria or nephralgia.

In November, 1890, Naunyn, in writing of nephrotomy for bleeding in nephritis, stated that "nephrotomy may some day play a far greater rôle in the treatment of Bright's disease."

Edebohls, April 22, 1899; 1901, and 1903, has given to the medical world his conceptions of the surgical treatment of nephritis, his operations and results. I wish here to commend that work. He observed the beneficial effects of nephropexy eleven years ago. "My first case was operated on as long ago as Nov. 29, 1892; my fifth April 1, 1897."[3] In speaking of his sixth case, in the same article, he says: "This operation, performed on Jan. 10, 1898, constitutes the first operation ever undertaken on the kidney with the deliberate purpose of curing chronic Bright's disease and, in so far, marks a period in the history of the affection." This case was published in his first paper (April 22, 1899), after my first publication.

Dr. Edebohls' work has taken root, and we are here and there hearing of good results from other surgeons. Physicians in the first rank recognize that there is a surgical treatment for nephritis. To Dr. Edebohls is due the credit of individually working out this surgical treatment and operating on more cases of Bright's disease than any other surgeon. While I am constrained to claim priority (first in publication), I can not but feel proud of the distinction and record the Doctor has made for himself in trying to solve the limitations of kidney decapsulation in nephritis. Dr. Edebohls'[4] published experience amounts to no less than 51 cases treated by operation. It will be seen in the description of my experience, our work has been developing contemporaneously.

I shall now very briefly refer to the development of kidney surgery before giving my personal work on nephritis. It is only thirty-five years since the kidneys have been operated on at all. Like many of the other internal organs of the body, diseases affecting them were treated by internal medication. We can appreciate how Peaslee (1868) felt when he removed a kidney by mistake, taking it for a solid ovarian tumor. Although the patient died on the third day of peritonitis, two lessons have been learned by his mistake. First, the feasibility of nephrectomy, and second, that urine was secreted abundantly by the other kidney. Spencer Wells' case also died, but not from suppression of urine.

The following year (1869) Simon of Heidelberg purposely and successfully attacked the kidney for a ureteral fistula in a woman. I have no doubt that his experiments on dogs in this line better fitted him to successfully perform the operation.

Within seven years after the first removal of a kidney by Peaslee, no less than 233 nephrectomies were collected by Gross (1885). It would take some considerable time to reckon the number of nephrectomies up to date. The operation was extended beyond its reasonable and legitimate limits. Chief among the indications for the removal of a kidney were stone, pyonephrosis, hydronephrosis, tuberculosis, floating kidney, nephralgia, hematuria, and tumors.

Nephrotomy for stone (nephrolithotomy) was first performed by Morris of London only twenty-three years ago (February, 1880). Then nephrotomy gradually supplanted nephrectomy in many cases.

Nephropexy, by Hahn (1881), was the next important advance in renal surgery.

PERSONAL EXPERIENCE.

In 1899 I explored a kidney suspected of containing a stone, in a young man, 24 years of age, suffering with renal colic. There was blood in the urine, and the kidney was very tender on pressure. The exploration consisted in exposing the organ and passing a darning needle, blunt end foremost, through it in many directions. No stone was found, but temporary relief from pain and hemorrhage was given. Within a year afterward he returned to see me. Bright's disease became more and more marked, and four years afterward he died of parenchymatous nephritis.

In my early fixation of floating kidneys, I used a stout chord of chromic catgut and passed it through them four or five times and, while using this stout cord, no complaints came from our patients after the operation. But just as soon as we began to use fine catgut or silk and grasp only the capsule two cases returned, complaining of pain, as before, although the kidneys remained fixed. In 1900 I explored one of these for stone with the knife; found nothing; had free hemorrhage, which was checked with iodoform gauze. This made a symptomatic cure; the nephralgia completely subsided, and she is now well. After this I did some fixations by cutting through the capsule, rolling it a little to each side, and passing sutures through it and through kidney tissue as well, with satisfactory results.

My first decapsulation, deliberately undertaken, was for "Nephritis and Floating Kidney."

NEPHRITIS AND FLOATING KIDNEY.

CASE 1.—*History.*—June 17, 1896, Edna L., aged 25, entered the Post-Graduate Hospital complaining of a painful, tender, floating and enlarged right kidney. Urine scant, ℥xx in twenty-four hours; contained 30 per cent. albumin.

Operation.—Nephrorrhaphy; capsule stripped off. Urine increased in quantity, and albumin decreased. Nephritis was diagnosed as a complication. Case lost sight of (hospital record).

DOUBLE DECAPSULATION FOR NEPHRITIS AND FLOATING KIDNEYS.

CASE 2.—*History.*—Sept. 9, 1897, Mrs. B. G., aged 30, entered the Post-Graduate Hospital complaining of pain in the region of both kidneys. She had been suffering for twelve years, particularly from her right side. She was operated on three years previously for ovarian abscess, and one year previously (in

3. New York Medical Record, Dec. 21, 1901.
4. Medical Record, March 28, 1903.

1896) for right floating kidney. Had one child twelve years of age. Her father died at 30 years of consumption. Her urine was very abundant, pale, and contained a trace of albumin. She was considered hysterical. Interstitial nephritis diagnosed. Both kidneys were floating freely.

Operation.—Capsule stripped from both kidneys, and sutured to lumbar fascia. She made a good recovery, and marvelously improved. Within six months she was able to do all her housework.

No cure was expected in this case, decapsulation being performed with the object simply of relieving her pain and tenderness. She was, two years later, symptomatically cured of her Bright's disease. It then occurred to me that all cases of tender and floating kidneys were cases of interstitial nephritis, and from this date (September, 1897) I expressed my convictions at my clinics.

MICROSCOPIC EXAMINATION OF KIDNEY TISSUE FOR THE FIRST TIME. LEFT FLOATING KIDNEY; INTERSTITIAL NEPHRITIS (BRIGHT'S). DECAPSULATION AND PUNCTURE.[5]

CASE 3.—*History.*—Mrs. M., 37 years of age and weighing 250 pounds, entered the Post-Graduate Hospital complaining of just two symptoms; (*a*) Dizziness, and (*b*) pain in the region of the left kidney. Taking morphin for the pain. Ill for three years. Began to have these symptoms after childbirth. Urine scanty, ℥xxiv in twenty-four hours. Normal, except a few hyaline casts.

Operation.—Jan. 4, 1899, I decapsulated the kidney, made multiple punctures in it, fastened it up, and removed a portion for examination. The immediate relief was astonishing to us all. Even the next day she declared that she was free from her old pain.

Pathology.—Microscopic examination of kidney tissue revealed interstitial nephritis.

In 1900 she returned, complaining of pain in her pelvis, and through the vagina I removed a left ovarian cyst. At this time her urine was normal in quantity and quality, but occasionally, such as after a hard day's work, she had an aching feeling in her left side, for which electricity was used. I have heard from her repeatedly during the past year, and she is symptomatically cured, it now being over four years since the operation.

INTERSTITIAL NEPHRITIS (BRIGHT'S); RIGHT FLOATING KIDNEY. DECAPSULATION. NEPHROTOMY (DRAINAGE); NEPHRORRHAPHY.[6]

CASE 4.—*History.*—Mrs. W., aged 26; chronic pain over right kidney, which was freely movable. Was taking from two to eight grains of morphin per day for the pain. (See full report.[6]) Had two confinements, one miscarriage, pulmonary hemorrhage, trachelorrhaphy, chills and fever (supposed to be malaria), cholecystotomy.

Operation.—Finally I operated on her right, tender, floating kidney. Owing to the septic condition of her urine, I thought the kidney was septic also, but it was not.

Pathology.—Microscopic examination of kidney tissue revealed the unmistakable changes of interstitial nephritis.

The immediate result was admirable. The albumin and casts cleared away before she left the hospital. After the first three days after the operation, she did without morphin, even though a habitué. Two years later she was well, and a later report brings the same good news.

INTERSTITIAL NEPHRITIS; NEPHROTOMY AND DRAINAGE OF LEFT KIDNEY.

CASE 5.—*History.*—Mrs. H.; aged 32. From Livery City, Iowa. Complains of pain and tenderness in the region of left kidney, which began two years previously, and then lasted severely for twelve hours, and had bloody urine. During 1897 and 1898 she had several attacks of pain and tenderness, referred to her left kidney, sometimes passing blood in urine, and often accompanied with chills and fever. During the last six months the attacks were more frequent, but no blood was passed with the urine. Mild chills and feverish sensations accompanied nearly every attack. On going over the case thoroughly, a diagnosis of recurrent interstitial nephritis was made.

Operation.—Nephrotomy was performed March 16, 1899, and kidney drained for twelve days. Patient left the hospital after three or four weeks, with marked general improvement, and entirely relieved of her pain and tenderness over the kidney.

Pathology.—The microscope shows interstitial nephritis.

INTERSTITIAL NEPHRITIS (LEFT). DECAPSULATION AND MULTIPLE PUNCTURES. GAUZE AND TUBE DRAINAGE TO KIDNEY.

CASE 6.—*History.*—Mrs. C., aged 43; dressmaker. In August, 1898, frequent urination; pain in back and over left kidney. Urine contained blood, albumin, casts; was highly colored and scanty, as reported by her attending physician at that time. Ever since this attack, kidney has been tender, but the urine has become abundant, three or four times the normal quantity, of low specific gravity (1,005), and always contained albumin and usually casts. Menstruation began at 14 and has been irregular. Edema of feet and hands; eyelids swollen and eyesight poor. Had pneumonia three times; inflammation of the bowels twelve years ago (probably appendicitis); abscess (1893) in pelvis opened into vagina; gonorrhea from her husband fourteen years ago (1885). Her mother died of ovarian tumor and interstitial nephritis. The region of the left kidney was tender.

Urine segregated, and that from the left side showed the following changes: "The specific gravity of both specimens is so low that I thought a mistake had been made, and we got water for examination. Doubting whether this was urine at all I tested for urea, and found 0.2 per cent. in both urines (should be 2 to 3 per cent.). There are some chlorids and phosphates, but the centrifuge shows no sediment of any kind, except a few squamous epithelial cells and oil globules in both specimens. No albumin; no sugar in either specimen. Reaction: Neutral in both specimens. No bacteria found in either urine. No casts." (Zeit.)

Pathology.—Report of kidney tissue: Interstitial nephritis.

Operation.—June 28, 1899. Left hospital in twenty-three days, improved in all her symptoms. In three months, urine much improved. Symptoms of nephritis almost absent. At the end of six months she resumed dressmaking. Her gain in general was slow, but gradual. During 1900 she had to cease working for a week out of every six or eight. In November, 1902, she was confined to bed for two weeks, and house for three weeks longer, with influenza. Both kidneys were sore and tender, but fortunately no active inflammation of them manifested itself. It was fully four months before she regained her usual health. Now she replied: "I am well; that is, much better than before the operation. I am working all the time, but have to be careful But I enjoy life. It makes me feel happy that for six months there has not been even a trace of albumin in my urine."

NEPHRITIS. DECAPSULATION.

CASE 7.—*History.*—Mrs. D., Redland, Iowa. Post-Graduate Hospital. Aged 34. Complains of: 1. Constant pain in the region of right kidney, with some pain in the left, off and on. 2. Inability to work for the last two years. 3. Urine irregular in quantity. 4. Shooting pains into back and thigh. Pain often severe all night, and during the day it is increased on motion. 5. Is weak, dizzy, constipated, and is troubled with palpitation of the heart.

Had a child two years ago, and has not been well since then. When 15 years of age, was struck in the right inguinal region with a baseball, following which she had colicky pains in that region for some time. Family history negative. Urine too abundant, ℥cxvi in twenty-four hours, of low specific gravity, 1,005; a trace of albumin; no sugar; casts, granular, hyaline; and contained indican. A diagnosis of interstitial nephritis was made.

Operation.—Decapsulation of right kidney. At the end of the third week urine in quantity only ℥xlv in twenty-four hours, and much freer from casts. (Portion of kidney removed was lost in the operating room.)

The patient left the hospital on the twenty-third day, free from her painful symptoms. Recent report not given. A

5. THE JOURNAL A. M. A., March 11, 1899.
6. THE JOURNAL A. M. A., March 11, 1899.

year after the operation she was symptomatically relieved, and felt that she was cured.

MOVABLE KIDNEY AND NEPHRITIS. DECAPSULATION; MULTIPLE PUNCTURES.

CASE 8.—*History.*—Mrs. J. E. B.; aged 45; married. Admitted May 7, 1901; discharged July 2, 1901. Housewife; Swedish. Diagnosis: Movable kidney and nephritis. Parents both died from some acute lung trouble at an advanced age. Has seven brothers and sisters living and well. Patient has always been well. Married at 39; no children; never pregnant.

Present Illness: About five years ago she noticed pain in the right side of the abdomen, above the crest of the ilium and in back. About one year later she discovered a lump in the right side. It was easily movable in any direction, the limit being the center of the abdomen, costal cartilages, and below to McBurney's point. Has no severe pains at this time. Has worn elastic bandage for some time. Was able, but with difficulty, to attend to her household duties. For the last six months a dull, aching pain in the region of kidney has been constant. Menses now regular and normal. Bowels constipated. Lost some weight.

Operation.—Placed patient in saddle, which brought the kidney well up to parietes. Incision four inches long. Stripped kidney of its capsule. Made multiple punctures and anchored as usual. Drainage of gauze in wound.

Urine examination: Before operation, specific gravity 1018; acid reaction; slight albumin; hyaline and epithelial casts; no sugar. Temperature before operation, 98 to normal; pulse before operation, 80. Temperature after operation, maximum, 101; pulse after operation, maximum, 110.

Result: Dr. E. M. Brown saw the patient December, 1902. She was then entirely well.

PARENCHYMATOUS NEPHRITIS AND STONE. DECAPSULATION AND NEPHROTOMY.

CASE 9.—*History.*—Mr. F. R., aged 38, of Luther, Ind., entered the Post-Graduate Hospital June 26, 1901. Complained of (*a*) pain in left side, running down to the testicle; (*b*) attacks of sharp pains, laying him up; (*c*) urine scanty and high colored. He passed gravel a year ago, after an attack of renal colic; then got some relief. The last few months the attacks have been more frequent, and recently the pain in the region of the kidney has become constant. The urine contained pus, blood, casts, bacteria, albumin, increase of chlorids and some bile.

Operation.—Decapsulation was made, because the capsule was firmly adherent. Nephrotomy was then performed, and several small calculi removed. Removed a section of the kidney and drained the kidney with a tube. This tube was left *in situ* until the discharge was free from pus and germs. He made a good recovery, left the hospital July 19, 1901, free from pain and greatly improved in his general health.

Pathology.—The report of tissue by Zeit and Klebs was that of parenchymatous nephritis, with cloudy swelling, regenerated epithelium, with granular and epithelial casts in tubes.

Result: Both immediate and remote, excellent.

RIGHT FLOATING KIDNEY; SUBACUTE NEPHRITIS. DECAPSULATION AND NEPHRORRHAPHY.

CASE 10.—*History.*—Miss H., single, aged 32; musician; American. Admitted April 16, 1902. P. and S. clinic. Discharged May 18, 1902. Condition improved. Examined by Dr. E. M. Brown, March, 1903. Well.

Family history: Father and mother living and well. Four sisters and one brother living and well. One sister died during confinement.

Personal history: Diseases of childhood. Always well until ten years ago; began to get pale and weak. Exhausted on the least exertion, also very nervous. Bowels constipated. Appetite fair. Uncomfortable after eating. Began menstruating at the age of 13 years. Always regular, but painful. Eight years ago had dilatation and curettement for painful menstruation.

Present trouble: About eight years ago the patient had a fall from horse, since which time she has noticed a lump in right side of abdomen, which is very movable. Also complains of pain in right groin and appendiceal region. Tenderness of gall bladder also.

Urine examination; On admission, color amber. Specific gravity 1012: Reaction acid. Albumin none. Sugar none. Epithelial and granular casts. Urates and mucus.

Operation.—Usual kidney incision; kidney brought up and stripped; anchored to fascia. One strip of gauze for drainage. Appendix found suspicious and removed.

Pathology.—Microscopic examination showed slight change in interstitial tissue and parenchyma.

Temperature before operation, normal to 99. Pulse before operation, 76 to 90. Temperature after operation, maximum, 101.06. Pulse after operation, maximum, 112. Recovery uneventful.

DISPLACED AND FIXED KIDNEY. DECAPSULATION AND NEPHRORRHAPHY.

CASE 11.—*History.*—Mrs. B., of Ashkum, Ill, aged 33. Referred by Dr. Ernest. Entered Chicago Hospital complaining of (1) pain in abdomen, especially on the right side; extreme tenderness on pressure; (2) intense pain, as if on fire, which patient insisted was the case; (3) great weakness, loss of weight and strength; (4) mental and constitutional condition much deranged.

Very unsatisfactory history, except that symptoms began after an attack of measles, followed by typhoid in February last, since which time patient has been gradually growing worse. In bed and unable to rise for over three months.

Physical examination revealed a firm, movable tumor, of the shape of a kidney, on a level with the umbilicus on the right side. This could not be returned to the kidney fossa. Urine: Specific gravity 1014; urea, 2.2 per cent.; albumin, peptone, indican, pus, epithelia, cylindroids and phosphates all present. Feces: No pus or blood, very fetid. Blood: Hemoglobin, 45 per cent.; red corpuscles, 4,500,000; leucocytes, 11,000; no Widal reaction.

Operation.—April 22, 1902. Exploratory incision down on tumor, which proved to be the kidney. All the abdominal organs examined and found normal. Incision closed. Lumbar incision made and kidney drawn up into it. Kidney congested and capsule thick and firm. Capsule stripped off and section of it and kidney removed for examination. Kidney sutured in place and drained with gauze and incision partly closed. Patient transfused, 1,000 c.c. of normal salt solution on table.

After-treatment: Patient given normal salt, one pint per rectum, every four hours for several days, and liquids *ad lib.*, by mouth. Pulse 120 and irregular. Temperature 102.8. During first four days patient had involuntary bowel movements, after which she began to retain normal salt and rectal feeding. Wound received daily attention and was kept clean.

On the twelfth day temperature was normal and pulse stronger and regular. Patient was able to be up on the twenty-seventh day, and on the thirty-eighth day following operation was able to be taken home.

Pathology.—Specimen normal, except for a few inflammatory cells. Present condition, patient in good health and well. Remarks: I fail to see what my operation had to do with her recovery. A. H. F.

RIGHT FLOATING KIDNEY. DECAPSULATION AND NEPHRORRHAPHY. GALLSTONES. CHOLECYSTOTOMY.

CASE 12.—*History.*—C. Hosp. Dr. McKibbon, referred. Miss F., of Kalamazoo, Mich., aged 24; stenographer. Complains of (1) pain in right lumbar region, aggravated by exertion; (2) some swelling of ankles and of eyes; (3) headache and nervousness; (4) loss of appetite, constipation.

Illness began two years ago with pain in right side, which extends up to shoulder and down right leg. In February last it became worse and patient is now in almost constant pain. Urine: Specific gravity, 1024; no albumin nor casts. Epithelium (squamous).

Operation.—May 26, 1902. The kidney was found movable and prolapsed, and the gall bladder was palpable. Kidney decapsulated and punctured and sutured to lumbar wall. Gall

bladder drained after removal of stones from it and the cystic duct.

Kidney was drained for two weeks. Patient had temperature of 100 till the eighth day, when it rose to 104. This was accompanied by great nausea and vomiting. Wound was dressed. Stomach washed out and patient given hypodermoclysis, a pint and a half of normal salt and a pint per rectum every four hours. Temperature dropped to normal in two days, and patient made a good recovery, leaving hospital on thirty-second day with small sinus, which soon closed. Now satisfactorily relieved.

PARENCHYMATOUS NEPHRITIS. DECAPSULATION OF BOTH KIDNEYS.

CASE 13.—*History.*—Mr. B., aged 37. Referred by Dr. Wm. E. Quine. Complains of (1) pain in both kidneys, greatest in right; (2) highly albuminous urine; (3) general anasarca and ascites, with pitting over tibia on pressure.

When attending college about seventeen years ago patient contracted syphilis, for which he was treated three years and declared cured. Three years ago came to Chicago, suffering from anasarca, ascites and albuminuria. His life was despaired of, but by mercurial inunctions all symptoms except albuminuria cleared up. Patient was sent to warm climate, where he improved rapidly, stopped the treatment, grew worse, and under doctor's instructions began treatment again. Improvement now was slow and unsatisfactory. Recently patient has not been so well and was referred for decapsulation.

Right kidney is palpable and tender. Left kidney not palpable, but tender on pressing over it.

Urine: Twenty-four hours, ℥xxxii. Albuminous (50 per cent.). Granular casts in abundance. Pavement epithelia. Blood and bacteria present.

Operation.—Aug. 19, 1902. Right kidney exposed; the capsule, which was firm and adherent, was stripped off and the kidney punctured. Gauze drainage inserted down to kidney.

Patient made good recovery. Urine began to increase from the beginning, being ℥xli on the second day. The albumin likewise decreased, until on leaving on the eighteenth day there was only about one-half of 1 per cent. There was a slight fistula, which was rapidly closing.

Second Operation.—Patient returned Sept. 30 for operation on left kidney. Urine: Twenty-four hours, ℥xxxi. Albumin, 2¾ per cent. Casts: hyaline and granular. Left kidney drawn into wound and decapsulated. Drained down to kidney with plain gauze.

Patient made good recovery, leaving hospital on seventeenth day, with incision closed. Urine improved in quantity almost from the first day, the following being the daily quantities in ounces: 31, 31, 21, 32, 49, 53, 38, 58, 52, 66, 62, 82, 94, 65, 74. The albumin decreased to 0.15 per cent.

April 26, 1903. Mr. B. now reports that his general health is good and sends the following report of his urine: Twenty-four hours, ℥lxxxv; color, light amber; reaction, acid; specific gravity, 1015; albumin, 0.05 per cent. (by centrifuge); leucocytes, a few red cells, small, as if from the kidney. Renal cells, some fatty and a few fine and medium casts.

Pathology.—Microscope shows parenchymatous nephritis with hyaline degeneration.

FLOATING KIDNEY. DECAPSULATION AND FIXATION.

CASE 14.—*History.*—Miss B., Newport, Wis., aged 24, nurse. Complains of (1) severe pain in gall bladder, but no colic; (2) jaundice, which is sometimes marked; (3) pain in back, which radiates down the right iliac fossa and legs; (4) drowsiness; (5) puffiness of eyes and swelling of wrists and hands; (6) temperature, 99 to 101; (7) loss of weight; lassitude.

Urine normal. Has a soft, compressible tumor continuous with the liver, and another movable and firm, which can be replaced to kidney fossa. Patient had a severe attack of pain radiating down the right leg in September, 1900, and a second in March, 1901.

In August, 1902, pains returned in right side, and shortly after this she noticed jaundice for the first time. A second attack compelled her to stop work, and after a short time she returned for operation.

Operation.—Oct. 4, 1902. The gall bladder was drained. The kidney was decapsulated and punctured freely several times and drained; then sutured in place. Kidney drained for two weeks and closed. Patient made a good recovery.

Pathology.—Microscopic examination reveals, practically, a normal kidney; the slight cloudiness and congestion being due to the chloroform and manipulations.

Present condition: Free from symptoms. Urine normal. Has some pelvic pain at and following menstruation.

BRIGHT'S DISEASE AND PELVIC DISEASE. DECAPSULATION OF ONE KIDNEY AND LAPAROTOMY.

CASE 15.—*History.*—Mrs. J. C. W., Chicago, aged 41, housewife. Complains of (1) backache; (2) pain in left side in lumbar region, extending up into shoulder and down into leg; (3) burning pain in feet, with swelling; (4) pain in pelvis; (5) dysmenorrhea; (6) headache, nervousness, sleeplessness; (7) frequent micturition; (8) nausea and at times vomiting; (9) constipation; (10) belching of gas after meals, but has good appetite.

Symptoms began eight years ago with nervous prostration. Following recovery she had a pelvic abscess, which was drained. Had excellent health until about two years ago, when she was treated for uterine troubles. Gives no good history as to when her kidney trouble began, but bladder has given her trouble for four or five years. Her kidney is easily palpable in abdomen, and replaceable to kidney fossa. She has some uterine displacement and strong pelvic adhesions, involving the ovaries and tubes.

Urine: Quantity in twenty-four hours, ℥xxx; specific gravity, 1030. Strongly acid. Hyaline and granular casts. Epithelium, small, round, spindle and pavement. Red blood cells and leucocytes. Bacteria. Cylindroids. Uric acid. Calcium, oxalate and urates in heavy deposit.

Operation.—Dec. 4, 1902. Curettage. Freeing of pelvic adhesions. Removal of both tubes and part of each ovary. Kidney decapsulated, punctured, fixed and drained.

Patient's temperature for a week was from 101 to 102, and during the second week she was wandering mentally, but later became rational and made a good recovery, leaving the hospital on the twenty-ninth day. Kidney tissue changes are both interstitial and parenchymatous.

Present condition: Relief of all symptoms (except the bladder). Gaining rapidly in strength and weight.

RIGHT FLOATING KIDNEY. NEPHRALGIA. DECAPSULATION; NEPHRORRHAPHY; APPENDECTOMY. KIDNEY TISSUE NORMAL.

CASE 16.—*History.*—Miss H., Bradford, Ill., aged 24. (Dr. Hawkins.) 1. Burning pain in right kidney, with exacerbations. Pain radiating down in region of appendix, which region was also troubling her. 2. Pain over whole right side of abdomen and down the right thigh. 3. Inability to work. 4. Loss of strength and confined to the house. 5. Attacks of pain in lumbar region, which would disable her for a week at a time, with frequent and painful urination.

Patient has been complaining about three years with symptoms referable to this kidney, and the pain in the region of the appendix was grafted on it in the last two months. Right kidney floating, enlarged and tender. Kidney could be pushed down into the iliac region. There was also tenderness over the appendix.

Urine: ℥xl, pale and clear. Specific gravity, 1007; neutral. Urea, .2 per cent. No albumin and no casts.

Operation.—Feb. 25, 1903. (1) Curettement and packing of uterus. (2) Appendix removed through kidney incision. (3) Kidney drawn up; decapsulated; capsule sutured to wall and incision closed.

Patient did well for three days following operation, when she had a slight rise in temperature to 99.6, and in pulse to 100, with pain in region of right ovary and tube, which spread over the whole abdomen. There was nausea and slight vomiting. Blood examination: 57,800 leucocytes, mostly polymorphonuclear form.

On the fifth day incision opened and gauze drainage inserted. There was no exudate, and there were no signs of infection.

Patient continued with signs of peritonitis, and died on March 9, just twelve days after operation.

Autopsy.—Peritoneal cavity had considerable fibrinous exudate. Kidney and wound normal. Cultures sterile. Appendix stump normal. Right tube slightly inflamed. Left tube and its region congested and inflamed. Cultures showed streptococcus. Descending colon as high as splenic flexure, and the sigmoid congested and inflamed, with fibrinous exudate. Cultures showed streptococcus infection. Death caused by streptococcus infection, probably an old infection of the left tube lighted up by the curettement, or by an infection following the curettement, which is doubtful.

CASE 17.—*History.*—Mrs. H., Chicago, aged 48. (Dr. Peacock.) In Chicago Hospital. Dr. Ferguson, consultant in operating room. Patient complains of (1) pain in the back, radiating down the right side and right thigh; (2) no urinary control; up several times at night and during the day; (3) pain in right iliac fossa.

Previous history: Ten years ago patient had ovaries removed. The commencement of pain is very indefinite, but it became quite severe during the last year.

The kidney is freely movable and very tender. Urine: Specific gravity, 1020; acid; urea, 1.5; hyaline and granular casts; small round epithelium. Considerable blood.

Operation.—March 20, 1903. Appendectomy by Dr. Peacock. Kidney decapsulated and punctured. Sutured in position. Gauze drainage inserted down to kidney. Incision closed. Patient made good recovery, leaving the hospital on the nineteenth day.

Present condition: Patient up and around the house. Relieved of all symptoms. Does not have to get up during the night, and urinates about every four hours during the day.

OBSERVATIONS.

For a synopsis of the histories of the foregoing cases I am indebted to my first assistant, Dr. Hugh Neil MacKechnie, and my associate, Dr. E. M. Brown. It will be observed that my personal experience dates back to 1889. In 1896 a nephritis in a floating kidney was deliberately treated by decapsulation, but not until Jan. 4, 1899, did I begin to remove sections of the diseased kidneys under treatment, and study them under the microscope. While the reports given above are incomplete, from lack of space, still it will be seen that our treatment was justified by the results. In the vast majority of my cases the kidneys were movable and also chronically inflamed. In only two cases was decapsulation carried out for parenchymatous nephritis. The results so far have been excellent and astonishingly prompt. The symptoms of the cases, regarding urinary changes, digestive disturbance, nervous phenomena, skin signs, circulatory and respiratory changes were recognized as not of the severest types of nephritis.

I did not operate on cases with urine extremely scant, very marked hypertrophy of the left ventricle of the heart, edema of the glottis and lungs, Cheyne-Stokes breathing, marked general anasarca, etc., etc. The urinary changes can not be absolutely depended on to indicate the tissue changes taking place in the kidneys until at least a late stage has arrived. It was noticed that a tender kidney is often relieved after its fellow has been decapsulated.

PATHOLOGY.

The pathology, macroscopically observed and handled on the operating table, and a study of the microscopic condition of the organ in a living patient are of superlative interest and importance. An enlarged kidney may have few or no histologic changes, while one normal in size is often surprisingly diseased. A contracted kidney is usually very much destroyed. The intimate relationship between the capsule and cortex of the kidney by adhesions does not give us an accurate idea of the extent of the inflammation. Neither does the appearance of the fatty capsule. The only scientific procedure to pursue to obtain anything like an accurate knowledge of the *status presens* of a kidney under operation is to remove a V-shaped piece of the cortical and pyramidal tissues and study it microscopically.

MICROSCOPIC OBSERVATIONS.

In ten of the seventeen cases a portion of kidney was examined and studied. There were no pronounced changes in three. The pain and tenderness in these three cases of floating kidney must have been caused by something else than inflammation. In five instances the interstitial form of the disease was demonstrated by the microscope, which in these verified the clinical or provisional diagnosis. The microphotographs prepared by Professor Zeit reveal a picture of chronic interstitial nephritis. The proliferation and hyperplasia of connective tissue and areas entirely connective tissue, with obliterated or waxy glomeruli. One also sees islands of partially changed kidney tissue, with atrophic tubules, and tubules with desquamated epithelium; flattened epithelial lining in tubules of diminished caliber and some swelling in the lining of the epithelial cells. The hyaline casts in the tubules are worthy of notice, as are also the thickened capsules of glomeruli and the concentric layers of connective tissue with many nuclei, etc.

OPERATION.

(*A*) *Superficial Oblique Incision.*—Make the skin incision a finger's breadth below the twelfth rib and parallel to it. Cut down to muscular tissue; then dissect the skin and fat from the muscles downwards to the crest of the ilium.

(*B*) *Deep Vertical Incision.*—Go through the rest of the structures as if to remove the kidney through the lumbar route, along the outer border of the quadratus lumborum. In cutting the lumbar fascia, keep well backwards.

(*C*) *Fat.*—On exposing the fat do not tear and traumatize it, as is so often done, but carefully cut with the knife its thin fibrous covering. Do not insert the hand to pull at the fat, but seize hold of it with many pressure forceps and deliver it externally. It will now be found that the kidney is immediately beneath your fingers in the wound.

(*D*) *Delivering the Kidney.*—Do not use the hand to deliver the kidney. Firm pressure on the abdomen and traction made on eight or ten forceps applied to the fat, close to the kidney, will easily bring a movable kidney outside the wound. In some few instances the renal vessels are too short to allow the kidney to be delivered at all. Indeed, it is not necessary to have the kidney dragged out in order to decapsulate it, but if it comes out easily, I do it. When the kidney is situated rather high, and the traction on the forceps does not promptly bring it down, I find a long narrow retractor, with a slight concavity outwards, passed beyond the upper pole, greatly facilitates its delivery.

Splitting and Peeling the Capsule Off.—Incise the capsule longitudinally over the vertex of the kidney for about two-thirds its length, peel it from the cortex with the handle of the knife or finger until it is entirely separated, then slip one end of the kidney through the slit in the capsule, and then the other, and it will be seen that it forms a collar around the hilum of the kidney. If the kidney is movable, I utilize the capsule to suture it in place, and the organ is left in contact with raw muscular tissue which is more vascular than the

fatty capsule and is, therefore, a more suitable structure to form vascular adhesions with the denuded organ.

Disposal of the Perirenal Fat.—Do not remove it or tear it to pieces, but gently displace it to the lower end of the kidney. It is but poorly supplied with blood vessels, therefore as little of the surface of the kidney as possible is left in contact with it, but when placed it furnishes an additional support to the organ.

Puncturing the Kidney.—In most of my cases I have freely punctured the cortex of the kidney in many places. This not only furnishes free drainage for inflammatory products, but also insures a thorough determination of blood to the parts, which hastens resolution and favors repair. It must also be remembered that the fibrous tissue formed for the purpose of repair in the absence of pyogenic organisms has a tendency later on to clear away rather than increase in bulk, and subsequently contract and become cicatricial. Of this we see many instances in surgery.

Drainage.—Drainage should always be established for five to eight days after decorticating the kidney. My experience leads me to use plain gauze and a small rubber tube for this purpose. It is astonishing the quantity of blood serum and urine that saturates the dressing for a couple of days. When drainage ceases remove the tube, and afterwards withdraw the gauze as it becomes loose.

Closing the Wound.—Use small-sized catgut to coapt the muscles and silkworm gut for the skin, the drainage tube and gauze emerging from the outer angle of the wound. After applying the dressing, place a firm pad of gauze or cotton on the abdomen below the ribs whenever nephrorrhaphy has been necessary.

HOW IS A CURE EFFECTED?

This has not yet been fully worked out. It is my opinion that the excellent immediate results are due to the relief of kidney tension and that the permanent benefit accrues in the cases demanding it from the establishment of collateral circulation with the diseased cortex. There are many instances of the formation of vascular adhesions in different parts of the body to support this latter fact.

EXPERIMENTS.

Before experiments on animals can throw any light on this subject we must first produce nephritis in them. In the production of this all efforts have been unsuccessful. I notice in the *Annals of Surgery*, April, 1903, Dr. H. A. Johnson writes on "Results of Decapsulation of the Kidney," being work done on dogs. He operated on 15 dogs; 5 died in from three hours to three days after the operation. The animals surviving the operation were killed. "Changes were studied two, four and eight days; two, three and four weeks; two and two and one-half months." The chief observation in his article is the eighth, viz., "In no case was there any considerable anastomosis between the renal and perirenal blood channels." It must be observed that in these experiments the kidneys of the dogs were normal and did not require additional blood channels for physiologic purposes, and also the organs were returned within the fatty capsule, which is but sparsely supplied with blood vessels.

In conclusion, I have no hesitation in affirming that decapsulation of the kidney in acute, subacute and chronic nephritis, both interstitial and parenchymatous, is a practical and effectual surgical procedure. Its limitations are not yet determined. While it can be pointed out that regeneration of kidney tissue is possible, it is folly to claim this procedure to be a panacea for Bright's disease.

10 Drexel Square.

DISCUSSION

ON PAPERS OF DRS. WHITACRE, GUTHRIE AND FERGUSON.*

DR. ARTHUR DEAN BEVAN, Chicago—The treatment of suppression of the urine is a subject to which my attention has recently been called by a number of cases, and one which I do not believe has been very well worked up by the profession. Recently I presented to the Chicago Surgical Society a case of anuria treated by surgical interference, and I found that the great majority of the members had not dealt in this manner with any case of anuria. This was my first case, the subject was rather new to me, and it gave me an opportunity to investigate it with some care. I came to the conclusion that the method had not been sufficiently emphasized and felt that the disease should be treated as a surgical entity. I attempted to make a clinical classification which would enable us at the bedside to determine on what line we should work in order to aid the patient. The classification which I decided on was as follows: 1, Obstructive anuria; 2, reflex anuria; 3, nephritic anuria.

The reflex condition, of course, is the one which is the most common and which gives the best prospects for relief under surgical interference. The reflex anuria, I came to the conclusion from the study of the cases, was a rather rare condition, although from the work of Getzel, the assistant of Israel, there can be but little doubt that such a condition does exist. Getzel's experiments, by increasing the renal tension, show that it would decrease the quantity of urine, in either or both kidneys, according to the application of the pressure, and when the tension was increased to a certain point in both kidneys, there would be entire suppression of the urine. Of course, in case of hydronephrosis on one side, fixture of the hydronephritic sac has been followed by relief of the anuria. The case presented by Dr. Whitacre, I think, comes under the nephritic group. Since reading this paper before the Chicago Surgical Society I have had an opportunity of doing a nephrectomy under nitrous oxid gas. The operation can be done in from five to eight minutes, during which time you can easily keep up the anesthesia, and this kind of anesthetic is especially valuable, as we are never sure of diagnosis until we make an exploratory operation. It may be a case of nephritic anuria; it may be a case of the obstructive variety, or there may be a stone in the kidney. A nephrectomy gives an opportunity of exploring the pelvis and relieving any abnormal condition which may be a cause of the anuria. I should throw out of consideration the decapsulation of the kidney for anuria and would say that the operation of choice was a nephrectomy under an anesthetic which could do no danger to the kidney tissue, such as nitrous oxid gas or infiltration anesthesia.

DR. WM. JEPSON, Sioux City, Iowa—It is hard for us to say, with our present knowledge, of just what value decapsulation of the kidney may be. One of the papers deals with the topic of who was the originator of the treatment by decapsulation; I know that Edebohls was not the originator, because we know that Redner did this operation in 1892 at the suggestion of Professor White, and he reported a number of cases before the British Surgical Association in 1898, in which he had this topic under consideration. In 1899 Israel reported 19 cases. So that I think we are safe in stating that Dr. Edebohls was not the originator of this method. Harrison reported 6 of these operations in 1896, and called attention to this method of stripping off the capsule in order to relieve the tension, and then, in addition, there were the cases of Professor Israel. Babinsky carried out these observations, and his work was proven by the fact that he removed sections of the kidney in order to determine just what the lesion was. Therefore, in cases of chronic nephritis we can hope for very little benefit from stripping of the capsule, but it is in those cases where we have an interstitial nephritis with an involvement of the surrounding

* The paper of Dr. Whitacre appeared in THE JOURNAL, May 23, 1903.

structure and thickening of the capsule, and especially where we have a hemorrhage under the capsule, that this method will do the greatest account of good. On the other hand, you will remember that Edebohls concedes the idea that by separating the capsule from the kidney it produces a restitution in the normal functions, even to the extent that the whole tubules have radically become regenerated. Now, with such opposing views, should we not be very careful and considerate as to whether these operations do or do not do the kidneys good? I am sure that we have all observed that marked benefit would follow an operation which was primarily undertaken as an exploratory operation. I think probably splitting of the capsule or of the kidney produces this change.

DR. ARCHIBALD MCLAREN, St. Paul, Minn.—I wish to emphasize the point made by both Drs. Bevan and Jepson, namely, that the advantage which we sometimes get in these cases of painful and uncomfortable kidneys, is often due to the splitting of the capsule, without the decapsulation. There are not many of us who are ready to recommend stripping the capsule in chronic nephritis as yet. We may later come to believe that this is the proper procedure. I can remember a number of cases where the conditions found were inexplicable with the results produced by merely splitting of the capsule, such as relief from the pain, disappearance of the albumin, etc., and many of these cases got considerable permanent relief. I have seen a few cases that have been decapsulated; although they received some immediate benefit, this improvment did not last long.

DR. RICHARD H. GIBBONS, Scranton, Pa.—The first man in all the world to recommend surgical interference for the cure of Bright's disease was Edebohls. All the others who did the operation did it incidentally, just as Dr. Ferguson did. They did not do the operation for the relief of Bright's disease; they did the operation for tension or some other cause which they supposed existed, but which they did not find when they operated. It was for this same reason that Israel did the exploratory operation and split the capsule, but Edebohls not only split the capsule, but he entirely decorticated the kidney; not only one kidney, but both kidneys, and afterward found that the condition could be relieved by surgery, and there is no man to whom credit for this work more justly belongs than to Edebohls, as he came out and recommended it for the condition, and would have had to have accepted his share of the damnation had it proved a failure. I believe so much in this method of splitting the capsule and detaching it in chronic Bright's disease as to have done the operation on my own sister, and at the same time I took out her appendix. I have had a number of cases of Bright's disease recover by this treatment, and many of them have been cases which have been proved to be this disease by the subsequent examinations of one of the best pathologists in Philadelphia. I had a case recently where I detached the capsule, and in which there was a number of multiple cysts in both kidneys, and the patient got well. Only four weeks ago to-day I operated on a young lady with a retroverted uterus, loose appendix and diseased kidney on the right side. She had all the symptoms of appendicitis, the diagnosis having been confirmed by Dr. Brooks of the Post-Graduate Hospital, New York. I referred her to Edebohls, as I hesitated to advise an operation without her seeing him. He recommended operation with fixation and decortication, which was almost entirely what I had recommended. She left the hospital last Sunday; her symptoms were improved in every way and the albumin in the urine very much diminished. Another case in relation to Dr. Whitacre's paper was a young woman on whom six weeks before I had operated for appendicitis, and expected to fasten a loose right kidney. I found a number of abdominal adhesions and decided to take out the appendix anteriorly. She got no relief and showed the usual symptoms of appendicitis and loose kidney. I operated on her several months afterward and fixed the right kidney, but did not touch the left kidney. She had all the symptoms of chronic Bright's disease, as proven by Dr. Brooks' examination. She immediately went into a state of surgical anuria. She died the latter part of the sixth day from complete suppression of urine, having passed six ounces up to that time. If I had only opened that woman on the left side, exposed her left kidney and decorticated it, the probabilities are that she would not have died from that condition.

DR. RAMON GUITERAS, New York—I think that the operation for chronic Bright's disease is still in its infancy, and it behooves us all to work with the object of improving our technic and bringing this operation to a position where it will be generally accepted by the profession.

Last year I read a paper before the American Genito-Urinary Association at Atlantic City, which was a preliminary report on this subject, and next week I am about to present a similar paper before the Congress of American Physicians and Surgeons in Washington. As there are so many varying opinions as to the advisability of attempting such an operative procedure, I have written to 150 of the most prominent surgeons in this country, and have mailed them circular letters covering the most important points connected with the operation, and have been very much pleased to find how many of them have responded to my letters. The opinions of these gentlemen, however, vary much. Some condemn it as an operation having no surgical or pathologic *raison d'etre*, while others reply at length, describing their experiences in a most enthusiastic manner.

Of course, as you know, the object of decapsulation of the kidney in this operation is to increase its circulation. Some of the leading medical men have likened the kidney after this procedure to the lung where there is a double circulation, the bronchial fortifying the pulmonary system. Dr. Johnson of San Francisco, in order to test the truth of this assertion, operated on a number of dogs in which he decapsulated the kidney for the purpose of investigation. He states that the blood supply is but slightly increased, if any, and a new capsule forms which in time becomes thicker and denser than that of the original one. It would take too much time to consider the question of Bright's disease, but as you know it is a disease of the kidney where either the connective tissue, the blood vessels, the Malpighian tufts or the tubules must be involved. Bad cases of Bright's disease very often show very little in the urine, while cases of transient albuminuria and cylinduria are often seen where no pathologic changes have occurred in the organ, although such changes will occur if the cause of the transient trouble is not corrected. These latter cases, we believe, are benefited or permanently cured by the operation mentioned.

Considerable has been said of late concerning unilateral Bright's disease, and some have spoken of this disease as present at times in only one kidney, or its being more marked in one kidney than in the other. It is a very difficult thing, it appears to me, on exposing the kidneys to say this kidney has nephritis and the other one has not, or this has nephritis to a greater or less extent than the other. Such fine discernment from a gross pathologic standpoint from viewing the outside of the organ when the capsule has been stripped off is, to my mind, next to impossible. In order to investigate the subject of unilateral nephritis I had the autopsy records of 500 cases of deaths from chronic Bright's disease looked over, and in only one case did I find the record of a purely unilateral affection, and this one, to my mind, could not be relied on. In only 14 cases out of the 500 did the records show that one kidney was more involved than the other. In nearly every case a very careful pathologic examination was made after removal of the organ.

DR. L. L. MCARTHUR, Chicago—Last year I undertook the relief of a chronic interstitial nephritis in the case of a young woman referred to me by members of this Society, Dr. Favill of Chicago and Dr. Norman Bridge of Los Angeles, who for six months had had the patient under treatment, and finding her but slightly benefited by medical assistance, treatment, change of climate, etc., had recommended removal of the capsules of her kidneys and requested me to do it.

I had little confidence in any good that might arise from the operation, but agreed to it because of the reports contained in the literature. Before the operation, I took pains, in addition to the examinations which they had made, to make a sep-

arate collection of the urines from both kidneys at three successive times for three successive weeks. The urine, when microscopically and chemically examined, showed the presence of Bright's disease equally affecting both kidneys. I then said that I would decorticate one kidney to see whether that kidney would be benefited as compared with the other. I did so. The quantity and quality of the urine from the operated kidney was very much increased and improved as compared with the other kidney. The patient improved physically; in fact, she was so much better that in the course of about three months she came back and urged the decortication of the capsule of the other kidney. Her condition physically was better; the edema of the eyelids had disappeared and the face assumed a more normal color.

I removed the capsule of the opposite kidney and its urine soon assumed as good a condition as that from the other kidney. Segregation was made in order to determine whether there was improvement or not.

There is surely some value in this operation, although just what the value of it may eventually be remains for time to tell. I do not think it is going to be good for every case of chronic or acute Bright's disease; we must yet learn to pick out the cases which will be benefited, and I would like to say further, in regard to Dr. Whitacre's case, that I think it is a mistake to cut away the capsule, since by a little procedure the capsule can be preserved and will make a good platform for the fixation of the kidney. This consists in making a transverse equatorial incision on the posterior aspect of the kidney, loosening the capsule first of one-half then of the other; when loosened the poles of the kidney can be delivered, leaving the empty capsule in one piece in front of the kidney. This can then be used to suture to those structures to which the movable kidney is usually fixed by a nephropexy. A detailed report of this case will be published later.

DR. F. A. DUNSMOOR, Minneapolis—One thing has not been said here to-day in the papers read. Experiments were made ten years ago by Dr. Wyman of Detroit, to demonstrate the production of Bright's disease in dogs by temporary ligation of renal vessels associated with stripping of the capsule, half of the method now used for a cure. In regard to the case of anuria, I agree with Dr. Bevan that many of the cases of postoperative anuria are due to the anesthetic, as the operations were made with perfectly aseptic methods and, therefore, it would seem that this could be the only cause for the anuria. I also wish to agree with him and with the last speaker that it is not necessary to strip the capsule completely, since the incision relieves the tension.

DR. RANDOLPH WINSLOW, Baltimore—I wish to mention a case under my care, which is somewhat different from those that have been mentioned, but which, nevertheless, is in the same line. A young woman who had been confined in the central portion of North Carolina, was evidently in a thoroughly septic condition in consequence of that procedure. After many weeks, her condition having become so bad that her life was despaired of, she was sent to Baltimore. She came practically on a litter, and it was feared she would die before she could get into the hospital. She did not improve on medical treatment; there was pain over the right kidney and pus in her urine with a septic temperature chart. She was subjected to a cystoscopic examination, without determining anything in particular and, owing to the fact that she had pain over the right kidney, it was thought that there was some trouble with that organ. The kidney was exposed and apparently there was no abscess connected with it. I presume there was some pyelitis. There was nothing which, in my opinion at the time, justified either removal of the organ or nephrotomy. I punctured the kidney in a number of places and then stripped the capsule from it. The patient improved rapidly. The pus disappeared from the urine and in a very short time she was sufficiently well to go home, and continued well when last heard from.

DR. H. J. WHITACRE, Cincinnati—In reference to the classification suggested by Dr. Bevan: First, I did not have the pleasure of reading this valuable article until mine had been completed, and, second, had I read the article I would not have followed the classification. My experience in this condition leads me to believe that this classification is incorrect. Dr. Bevan has given his classification into the obstructive, the reflex and the nephritic forms. One object of my paper was to present serious objections to the inclusion of obstructive lesions under the heading of suppression of urine. I do not believe that this form belongs under the heading of suppression of urine at all, no more, indeed, than does retention of urine.

I wish to likewise make objection to his second and third forms. True suppression of urine always concerns the parenchyma of the kidney, therefore all forms must be nephritic and a reflex suppression must likewise be a nephritic form. The classification which I have presented includes these two forms and more too. In all cases of true suppression of urine the parenchyma of the kidney is at fault. This may be a reflex fault, a degenerative lesion, the result of lessened heart action, the result of an anesthetic, or the direct result of trauma. Objection has been made in the discussion to the operative treatment of suppression of urine as irrational and improper. It was impossible for me to read my entire paper. It will be found, however, in the complete paper that such is by no means advised for all forms of suppression of urine. It is by no means advised that a degenerative lesion be submitted to operation, but that every possible agent be employed to improve the nutrition of the degenerated cells and to improve the flow of good blood to them. Nobody would think of treating a suppression of urine which occurs in shock from lowered blood pressure by administering an additional shock. Suppression from trauma could not be improved by adding another trauma. It is the purpose of the paper to classify the etiologic factors present and to show that operative treatment by decapsulation is not only rational, but actually demanded in those cases of suppression of urine that result from a reflex circulatory or vasomotor disturbance in the kidney. My reasons for recommending this treatment have already been given in that section of my paper which deals with the pathology.

Dr. Bevan has recommended nephrotomy as a more rational operation. It seems to me that a nephrotomy would not meet the indications, unless it split the kidney from end to end. The tension is exerting its deleterious influence on every cubic mm. of kidney parenchyma, and a single short incision would relieve the tension over only a very limited area. I do not see the advantage of opening the pelvis of the kidney. it is not at fault at all. I should most unhesitatingly recommend such procedure when there is reason to suspect a calculus in the pelvis.

Dr. McArthur has recommended that only an equatorial segment of capsule be removed, or, if the entire capsule has been stripped off, that this be turned back under the kidney and used to anchor it. I think that I caused a kink in the ureter of a floating kidney by doing this very thing.

I have done decapsulation for Bright's disease once on the large white type of kidney. The results were not satisfactory, however, and I felt at the time of the operation that the operative procedure was in reality not relieving his kidney very much. I do not believe that this type of kidney will yield good results by this method.

DR. ALEX. H. FERGUSON, Chicago—I think there are one or two points in regard to the operation that ought to be made a little clearer. When the kidney is exposed the fat ought not to be taken away, but left displaced below it. The sudden effect which this operation has on the urine and the symptoms of the disease is simply marvelous. They are usually better even the next day, and the old pain is gone, and the albuminuria and the casts decrease within a couple of weeks. But how is this effected? That is the question that concerns us. First probably by relief of the tension. That would pertain to those cases in which there was intracapsular tension, such as would be produced by acute inflammation, like those cases of Reginald Harrison. In all the acute and subacute cases there is pain and tension, but later comes a stage where there is no

tension, but just the reverse, a contracted kidney. There are various stages of contracted kidney that are more or less benefited by decapsulation. How does this come about? By collateral circulation, I think. Now experiments have been performed on dogs by Johnson of San Francisco, and in no case, he states, was there any considerable anastomosis established between the renal and perirenal blood channels. He returned the kidney back into the fatty capsule, where there would not be much attachment of a vascular nature seen. Experiments on dogs with normal kidneys do not bring the results that operations on a person who is suffering from nephritis do. I had a patient who came to me suffering from an infection of the kidney. I opened the kidney and the wound closed rather too soon, and the patient went home; the pain returned and she came back. I then opened the kidney again and removed a portion of the organ. There was a vascular connection formed between the kidney and the pseudo-capsule.

In regard to this claim to priority, I do not wish to be misunderstood. But when a certain man does certain work and publishes it, not in an obscure medical journal, but in THE JOURNAL of the American Medical Association, on a certain date, and another man does certain work along the same line and publishes the result of his labors one month and eleven days afterward, it would seem that the first author should be the one entitled to first credit. But that does not matter very much.

EVOLUTION OF THE MAMMALIAN STRAIGHT GUT.

WITH SPECIAL REFERENCE TO PERITONEAL CHANGES INCIDENT TO ROTATION.*

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As is generally conceded, the adult peritoneum of man, while a macroscopic structure of liberal proportions, is, nevertheless, complex beyond the ken of the ordinary student, without embryologic study. To such an extent have certain organs as spleen, liver, stomach, pancreas and colon migrated from their primitive location in the posterior mid-line of the body cavity, and contracted such intimate and deceptive physiologic adhesions, that even embryologic speculation as to the *rationale* of their migration was slow of general acceptance by the profession. If, now, to these numerous physiologic departures there be superadded pathologic departures incident to inflammatory processes, some conception of the difficulty confronting the student in his dissecting-room study may be imagined.

Within recent years our standard text-books on anatomy were monumental in their respective chapters on the peritoneum, to the most flagrant violation of perspicuity. There is no longer doubt that in the study of the abdominal organs and their investing peritoneum, two methods must be pursued: 1. The practical method by which each organ, with its corresponding peritoneal investment, is to be identified and studied *in situ*. 2. The embryologic method, by which the products of the primitive straight gut, Wolffian bodies, Müllerian ducts, and indifferent sexual gland are studied, in their successive developmental stages, from the simple to the complex. According to Huntington, the peritoneum of certain lower animals should be studied along with the human peritoneum, because in them the permanent adult arrangement corresponds to one of the early embryonal human stages. Huntington says:

It is doubtful if the detailed developmental stages in man can ever be clearly comprehended unless the student will for himself examine the conditions, and perform the manipulations (of rotation) in one of the lower animals. The necessity of keeping the three dimensions of space in mind, and the fact that certain structures during and after rotation cover and obscure each other, make diagrams and drawings unsatisfactory unless the actual examination of the object itself is combined with their study. The cat answers every purpose of this study admirably.

It is believed that the mechanical device here presented will be of some advantage to the teacher in presenting the difficult subject of the anatomy of the peritoneum to large classes of students. It has the further advantage, by virtue of its strength and stability, of being available for the use of students, who can readily learn its proper manipulation. The device, constructed principally of rubber dam and inflatable bags and tubes, simply reflects the embryologic illustrations in our text-books. It is not intended to supplant the practical study of the peritoneum of man or the lower animals. We believe it shows with tolerable accuracy the mechanical principles involved in the following points:

1. The primitive straight gut attached (a) to the posterior abdominal wall by a dorsal mesentery; (b) to the anterior wall as low as the umbilicus by a ventral mesentery; (c) to the umbilical region by the intra-embryonal part of the yolk stalk.

2. A dilation of the gut tube, differentiating the primitive tube into stomach and intestine, and its investing peritoneum into mesogaster (ventral and dorsal) and mesentery.

3. A drawing out of an U-loop of gut from the dorsal wall, increasing the length of the mesentery, and presenting an upper and a lower limb separated at the neck of the loop by the superior mesenteric vessels.

4. Evagination of liver and gall ducts from the ventral wall of the duodenum into the anterior mesogaster, showing location of the primitive gastrohepatic omentum and the derivation of the hepatic peritoneum from the anterior mesogaster.

5. Evagination of pancreas and its duct from the dorsal wall of the duodenum into the posterior mesogaster, showing the primitive peritoneal investment of this organ.

6. Location of the spleen in the posterior mesogaster, in close proximity to the pancreas, showing the gastrosplenic omentum and the phrenicosplenic ligament derived from the posterior mesogaster.

7. The broad ligament of the liver, the hepatic peritoneum, the gastrohepatic or lesser omentum, the gastric peritoneum, the mesoduodenum, the splenic and pancreatic mesenteries, and the gastrosplenic omentum—all of which are derived from, and are specialized parts of the primitive mesogaster.

8. Rotation of the mesogaster whereby liver, stomach and spleen begin to assume their adult relations, and dimly foreshadow the beginning of the lesser cavity of the peritoneum.

9. Evagination of posterior mesogaster to the left, showing the formation of (a) the greater omentum; (b) the foramen of Winslow; (c) implantation of the posterior mesogaster and pancreas on posterior abdominal wall, to the left of the mid-line of the body.

10. Rotation of the U-loop of the intestine from left to right about the long axis of the superior mesenteric vessels, showing the transverse duodenum passing beneath these vessels, and taking up its adult position.

11. Differentiation of the gut caudad to the attachment of the yolk-stalk into a large and small intestine.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

The following summary, founded largely on Heisler, includes the salient points in the evolution of the alimentary canal and its accessory organs, and points out (a) the condition of the structures during the period of primary parietal peritoneum before rotation; (b) the migration of organs, consequent on rotation, when they acquired their adult position and relations; (c) the structural changes in certain localities, in both visceral and parietal peritoneum, incident to adhesion between peritoneal surfaces; (d) the mechanism of rotation, whereby liver, stomach, spleen, pancreas, duodenum and intestines departed to greater or less degree from their primitive location in the mid-posterior line of the abdomen. I also append observation on 200 cadavers with reference to rotation.

1. The abdominal part of the alimentary canal, in the second week of embryonal life, consisted of a gut tract separated in part only from the yolk-sac.

2. In the third week, the gut tract assumes somewhat the form of a straight tube, presenting, near the head-end, caudad to the future stomach, the beginning of an evagination, the future liver.

3. In the fourth week the straight gut dilates cephalad, initiating the future stomach. The lumen of the bile passages is completed, and the liver-diverticulum divides, thus foreshadowing the future major lobes of the liver; the pancreas is evaginated from the duodenum, growing subsequently into the mesoduodenum and posterior mesogastrium.

4. The original straight gut in the fifth week becomes somewhat convoluted, and foreshadows the first tangible evidence of its future complexity in the U-loop, and a disposition to differentiate into large and small intestine. The loop consists of (a) an apex attached by the vitelline duct to the yolk-sac; (b) of a descending limb, which subsequently develops the major part of the small intestine caudad the duodenum; (c) of an ascending limb from which the future cecum, ascending and transverse cola, and distal end of the ileum are derived. The loop, by traction exerted through the yolk-sac, now projects its developing coils (up to the tenth week) through the open abdominal walls into the hollow of the umbilical cord, thus forming, according to Huntington, the so-called umbilical embryonal intestinal hernia. It should be noted that growth proceeds from the apex of the loop; that growth of the descending limb of the loop is rapid, while that of the ascending limb is slow.

5. In the sixth week the duodenum, enclosed in the mesoduodenum, and presenting its well-advanced hepatic and pancreatic evaginations, is fully differentiated from the stomach, and develops its primary duodenal loop. At this period the cecum is formed by buddation and the rectum is developing.

6. In the seventh week the transverse and descending cola are indicated, and, by a process of unequal growth, the cephalic end of the colon differentiates into cecum proper and appendix vermiformis.

7. In the eighth week the gall bladder is formed, and the anlage of the spleen is first observed.

8. In the tenth week the loop of small intestine, which up to this time was encouraged to protrude into the hollow of the umbilical cord, begins to enter the abdominal cavity, a circumstance due to the closing in of the somatopleure on the future umbilical opening.

9. In the twelfth week the histologic characters of the adult peritoneum become established and rotation occurs, a process by which organs, thus far in the mid-line of the body cavity, begin to assume their adult relations.

At this period, the third month of fetal life, immediately preceding rotation, the parts of the alimentary canal with their investing peritoneum and blood vessels, are about as represented in the model. It may be in order now to review the salient features presented before rotation, in order that the post-rotatory locations and relations of organs, with consequent loss of peritoneum in certain places, may be better appreciated.

The stomach appears in the mid-line as a dilatation of the initial end of the intestine between two layers of peritoneum known as mesogastrium. As the stomach enlarges it displaces these two layers, and gastric peritoneum is the name given to the displaced membrane.

The double layer of peritoneum, which, enclosing the stomach, proceeds, ventrad to the anterior and dorsad to the posterior abdominal wall, under the name of ventral and dorsal mesogastrium respectively.

The liver, developed as an evagination from the ventral surface of the duodenum, acquires its artery from the gastroduodenal which originally traversed the space of the posterior mesogaster and entered the anterior mesogaster. As the liver grows, it displaces peritoneum (anterior mesogaster) and the displaced membrane is called hepatic peritoneum. The liver is now seen to occupy a place in the mid-line of the body, anterior to the stomach, between two layers of ventral mesogaster.

The two layers of peritoneum bridging the space between the stomach and liver, is a part of the anterior mesogaster called the gastrohepatic (and containing the root structure of the liver) or lesser omentum. Likewise, the two layers of anterior mesogaster extending from the liver to the diaphragm constitute the falciform ligament of the liver.

Pancreas.—The pancreas arises as an evagination from the duodenum. It grows into the mesoduodenum and into the adjacent segment of the posterior mesogaster.

The spleen develops from mesodermic tissue near the cephalic end of the stomach, between two layers of the posterior mesogaster, and subsequently takes up its adult location as a result of rotation.

The mesogaster at this period consists of two layers of peritoneum, enclosing the stomach, liver, spleen and pancreas. Its four parts unoccupied by these organs are the falciform ligament, the lesser omentum, the part attached to the posterior wall of the abdomen, and the great omentum.

The primitive duodenum extends from the stomach to the neck of the U-loop of intestine. It obtains at an early period its nourishment from the primitive gastroduodenal artery, from which the hepatic artery is ultimately derived. It has a well-marked dorsal mesentery, the mesoduodenum, consisting of two peritoneal layers.

The U-loop, from which the small intestine caudad of the duodenum and the future ascending and transverse cola are derived, is between two layers of primitive dorsal mesentery, which finally differentiates into the mesentery proper and the mesocola of the ascending and transverse cola.

It will be observed that at this period, before rotation, the walls are covered by primary parietal peritoneum, and that the alimentary canal, liver, stomach and pancreas are invested by primary visceral peritoneum.

As a sequence of rotation, a transposition of organs occurs by which the liver and spleen appear laterad to the stomach. The stomach itself assumes now a more horizontal position in place of its vertical embryonal position, and consequently retaining distorted relations to liver and spleen, through their respective omenta.

V 19

The posterior mesogaster evaginates to the left, forming great omentum, and its cavity the lesser cavity of the peritoneum. As Huntington puts it:

> The changes which are to be observed in the later stages, depend principally on a peculiar feature characteristic of the development of the dorsal mesogastrium. This feature consists in the extreme redundancy of the membrane, which grows out of proportion to the requirements of its visceral connections, and to a certain extent becomes independent of the direct mechanical purpose of carrying blood vessels to the viscera.

The mesoduodenum immediately succeeding the stomach has right and left surfaces which embrace the head of the pancreas. It falls to the right, presenting thereafter ventral and dorsal surfaces with the head of the pancreas resting on the vertebral column, vena cava, and right kidney.

Note the relation of the duodenum, superior mesenteric vessels and colon at the neck of the U-loop. Upon rotation, the duodenum is ventrad, the colon dorsad, with the vessels between. After rotation, the relation of the duodenum and colon are reversed.

Mechanism of Rotation: (a) The large intestine passes ventrad and dextrad across the jejunoileal coils toward the cephalic end of the abdominal cavity, and lies transversely along the greater curvature of the stomach. (b) The cecum turns to the right against the caudal surface of liver and ventrad of duodenum, and reaches the ventral surface of the right kidney. The colon is crowded cephalad; the small intestine to left and downward. The small intestine rotates about the axis of the superior mesenteric vessels, bringing the transverse duodenum beneath these latter, and in contact with the vena cava and aorta.

Peritoneal losses, the result of adhesion, are sustained in the following localities: (a) The ascending and descending cola lose their visceral peritoneum at contact point with the walls, while their respective mesocola become secondary peritoneum for the posterior abdominal walls in these regions. (b) The second stage of the duodenum loses its visceral peritoneum dorsad, where, as a result of rotation, it contiuges the abdominal wall and right kidney; also where it lies dorsad to the hepatic flexure of the colon. (c) The transverse duodenum suffers peritoneally where it rests beneath the superior mesenteric vessels, and on the vena cava, aorta and vertebral column. (d) The great omentum suffers concrescence of peritoneum at the contact point of the left kidney, pancreas, transverse colon and mesocolon, and on the posterior abdominal wall in the neighborhood of the diaphragm.

The following observations on peritoneum and alimentary canal were made with special reference to developmental sequences of rotation, on 200 bodies, and appear as a dissecting-room record:

1. Non-concrescence of great omentum. In ten instances adhesion between anterior and posterior layers of great omentum had not occurred.

2. Foramen of Winslow obliterated. In twenty-five instances, obliteration of the foramen of Winslow, presumably from inflammatory causes, had taken place. In seven of these twenty-five cases there were evidences of extensive inflammation of the right pleura. This would seem to be a practical illustration of the possibility of a septic fluid in the right pleural cavity gaining access to the peritoneum through the hiatus diaphragmaticus.

3. Meckel's diverticulum. In fourteen instances Meckel's diverticulum was present. The longest was five inches, the shortest one inch in length; the smallest was about the size of an ordinary sewing thread, and patulous.

4. Ascending mesocolon. In twenty-two instances there was a well-defined mesocolon and mesocecum. This was evidently a case in which fusion had failed to occur between the primitive mesocolon and the parietal peritoneum. The mesocolon was traceable to mid-line.

5. In twenty-six cases there was a well-defined descending mesocolon, and undoubtedly instances of a survival of the primitive descending mesocolon.

6. Primitive mesentery. In seven instances the only mesentery proper was a primitive one, attached about the superior mesenteric vessels.

7. Long mesosigmoid. In twenty-five instances the mesosigmoid was unusually long. In one case the omega loop was 28 inches in length.

8. Little fat in great omentum. In forty instances the great omentum contained practically no fat. In four of these forty cases, adhesion had not taken place between the anterior and posterior layers of the great omentum.

9. Mesentery of gall bladder. In four instances the gall bladder had a distinct mesentery; in one case it was 2 inches in length. (Now on display in pathologic exhibit.)

10. Extensive adhesions. In forty-five cases there were extensive peritoneal adhesions, both local and general. Especially extensive in regions of gall bladder and appendix.

11. Non-concrescence. In five instances there was no concrescence between the deep layer of the great omentum and the transverse mesocolon.

12. Loss of mesosigmoid. In twenty-three instances there was complete loss of mesosigmoid.

13. Arrested rotation. In four instances arrested or faulty rotation deposited the large intestine entirely to the left of the median plane of the body.

14. There are two varieties of peritoneal adhesions. (1) Physiologic; (2) pathologic. Histologically the two differ in degree only, and I believe it is generally conceded that the physiologic ones are the weaker.

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DISCUSSION.

DR. LEMOYNE WILLS, Los Angeles.—I have been fortunate to teach this branch for the past fourteen or fifteen years, and I know of nothing harder to teach a student than the practical understanding of the peritoneum. I think it is a great pity that Dr. Eckley did not have his apparatus here to-day, and I hope to be able to get one and use it. I do not think the practitioners of medicine who have been practicing fifteen or twenty years know very much about anatomy, and it would be a very good thing if we had more papers like this.

DR. RICHARD H. GIBBONS, Scranton, Pa.—This paper is far more important than a peck-measureful of papers on appendicitis. There is nothing that has given me more courage to go out and do my work than the teachings I got from Dr. Leidy on the peritoneum.

Veratrum Viride in Puerperal Eclampsia.—De Bustamente adds his testimony to that of others in regard to the value of veratrum viride in eclampsia. He reports in the *Revista Med. Cubana* four cases thus treated. The convulsions were definitely arrested in all, but severe vomiting followed in 2. One patient was injected three times on following days, the last time as a prophylactic measure, when premonitory symptoms indicated the return of the convulsions. Her pulse fell from 99 to 60 and 54 each time in an hour afterward. He injected 1 gm. of the fluid extract, but in future will inject half the amount at a half-hour interval, in the hope of obviating the vomiting. The effect on the eclampsia was unmistakable and has convinced him that this drug is superior to all others yet known for this affection.

PITYRIASIS ROSEA.

AN ERYTHEMATOUS ERUPTION OF INTERNAL ORIGIN.*

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NEW YORK.

The disease of which I intend to speak to-day does not belong to those very frequently observed. Its frequency, according to statistics, is between 5 and 12 per cent. of all skin affections presenting themselves for treatment. When we consider that the affection, by not causing imminent symptoms, is apt to be overlooked by the patient, its frequency will be somewhat augmented. If we add to this fact that the discernible features of the disease greatly resemble another skin eruption—tinea maculosa and circinata—we have another source of increased frequency, which must be accounted for when estimating the ratio of its occurrence among the dermatoses.

It is strange that even busy dermatologists will at times encounter no case at all, while at other times the well-known mysterious multiplicity of cases will materialize itself by a string of cases within a limited period. Hyde saw 87 cases in 18 months. The spring and fall seasons seemingly enjoy the distinction of producing the disease. Generally speaking, it is a borderline question between herpes tonsurans maculosus and squamosus corporis and pityriasis rosea; the latter, an erythematous eruption of internal origin.

HISTORY.

An affection like pityriasis rosea, with its sudden onset and with its profuse crop of lesions resembling those of an acute exanthema in some respects, could not easily have escaped the attention of dermatologists. It was not unknown to the older authors. In the chaotic condition of dermatology before Hebra, skin affections were described solely by their most discernible signs and effects, regardless of their anatomo-histologic conditions, and labeled with names the purport of which is sometimes hard to grasp. To mention only a few instances: Willan, the pathfinder in dermatology, in 1798, under the name, roscola annulata, mentions an affection which corresponds with the circinate form of the disease in question.

Rayer, in 1828, by the term, erythema annulatum, describes a skin disease which closely resembles pityriasis rosea.

In 1857, Erasmus Wilson,[1] under the name of lichen annulatus serpiginosus, describes a skin affection, "small, flat, erythematous discs, bounded by a sharp and distinct margin . . . . and converted into rings." A description which closely resembles pityriasis rosea.

In 1862, Bazin,[2] in describing the different forms of pityriasis, mentions one variety, pityriasis rubra aigu, depending on internal causes, especially on a "gouty and herpetic diathesis." He terms it pityriasis maculata et circinata. The former answers the description of the maculous form of our pityriasis rosea. Bazin was the first to mention also the annular form, and by so doing describes a hitherto unnoticed form of the disease, believing it to be of idiopathic origin.

Shortly after, in 1868, the affection was recognized by Hardy,[3] and excellently described under the name of pityriasis circiné. He cautions against confounding it with tinea circinata (*l'herpes circiné*), giving valuable differential diagnostic points.

The first to make the affection known as a disease *sui generis* was Gibert,[4] in 1860, one of the many great talents that the "St. Louis" in Paris has produced. His classical description is yet recognized as the standard by which the affection which bears his name is diagnosed. Gibert, however, describes only the macular variety of the disease, which is rather strange and adds somewhat to the confusion existing. As the disease in almost every instance occurs in the maculo-annular form, we must infer that Gibert has seen a peculiar macular form of it, or that there may be two forms of pityriasis rosea.

The disease was practically unknown here and on the continent with the exception of France, where the older authors had described it, as we have seen, rather imperfectly under various designations; when Duhring,[5] in September, 1880, in a paper read before the fourth annual meeting of the American Dermatological Association, independently and without the knowledge of the researches of others, published his six cases, giving an excellent description of the affection. Therefore, he may justly claim the honor of having been the first American to deal with it. In comparing his cases later he found them to correspond with an affection described by Bazin under the name of pityriasis maculata et circinata. Failing to find an account of it in Gibert's work he gives the honor of priority to Bazin. This, however, was an oversight, as in the third edition of Gibert's book, which appeared in 1860, two years before Bazin's, on page 402, Gibert describes the disease which bears his name as pityriasis rosea.

The views on this disease took a sudden change when Hebra,[6] in 1876, described what he thought to be a disseminated form of body ringworm, occurring as an acute and general eruption in form of maculæ of pale red color, with a fine furfuraceous scaling. He and Kaposi called it herpes tonsurans maculosus et squamosus. It is strange that such acute observers do not mention the annular form as we are wont to see it, according to the modern description of pityriasis rosea. From this time on the path of pityriasis rosea became a troubled one. The first to take up the gauntlet against its parasitic nature was Horand[7] in Lyons, 1876. He describes seven cases in children, resembling pityriasis rosea and corresponding with Hardy's description of the disease. He declares it to be of non-parasitic nature, although two brothers who slept in the same bed had it.

The contemporary literature shows only a few and solely French contributions. In 1877 Vidal,[8] who called it erythéme desquamatif pseudo-exanthematic, and Metton;[9] in 1880 Nicholas,[10] whose description rather fits eczema seborrheicum psoriasiforme, published accounts of the affection. In 1881 Oatman[11] published his case resembling tinea versicolor, except that it was brighter and redder.

Behrend,[12] in Berlin, 1881, was the first German author to write on this subject. He declares pityriasis rosea an independent disease, not extremely rare and most probably of parasitic, although not of trichophytic origin. He wants it to be termed roscola furfuracea herpetiformis. In 1882 Vidal[13] describes a parasite found in the scales of pityriasis rosea which he calls microsporon anomoen or dispar; the pathognomonic significance of which is, however, much contested.

The literature on this topic now became somewhat more extensive concerning the entity of pityriasis rosea. Hans[14] describes a case where a whole family developed pityriasis circinata from a trichophytic dog. From this he tries to establish the identity of both diseases. In 1882 Weyl[15] pleads for the independent standing of the

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affection, and Behrend[16] again emphasizes that it is not only different from ringworm, but coincides with Vidal by believing in a parasitic and non-parasitic form of the disease.

In 1882 Jamieson[17] calls it an imitator like most skin diseases. In 1884 Colcott Fox[18] describes the affection in children and establishes Gibert's claim of priority. In 1885 Chapard[19] and Kinnier[20] wrote on this affection, and Ferrari[21] coincides with Vidal as regards the presence of his parasite.

Blanc,[22] Bulkley, Fox and Robinson[23] describe this affection, being doubtful as to its origin. In 1886 Jaquet[24] writes of this disease as having some connection with gastric dilatation. In 1887 Brocq[25] published his celebrated article in which he draws attention to the so-called "herald patch" as a distinctive diagnostic sign. Peroni[26] observed a small epidemic of herpes tonsurans maculosus et squamosus Kaposi, which he thinks to be a roseola furfuracea trichophytica. He alleges its contagiousness, which is, however, open to doubt. In 1888 Boeck[27] speaks of the disease, and Unna[28] touches on the relation of pityriasis rosea to seborrheic eczema.

In 1899 Barduzzi[29] describes three cases with no fungus found; his inoculation experiments, as did Weyl's and Koebner's, proved negative. Moingeard[30] regards it as a general infection with a cyclic course. Jaquet[31] again emphasizes its connection with gastric disturbances, and Besnier[32] points out the analogy existing between pityriasis rosea and eczema seborrheicum and its coincidence with gastric disorders. Fournier[33] dilates on a case, persisting four years, remarkable for the confluency of its lesions. Feulard[34] thinks dilatation of the stomach to be an etiologic moment. Hallopeau[35] relates a case of four years' standing and von During[36] declares it to be an independent disease. Mracek[37] describes a case of herpes tonsurans universalis complicated by polyarthritic rheumatism. In 1890 Thibierge[38] enlarges on the importance of the Fournier "medallions," and gives an excellent histologic résumé. Köbner[39] mentions a case in a syphilitic with mucous patches of the pharynx, finding micrococci; to which, however, he does not attribute any etiologic dignity.

In 1891 Moingeard[40] regards it as a general infection. Tenneson[41] reports a case of six months' standing. Lefevre[42] describes a case where the eruption did reappear intermittently on the same places.

In 1892 Lassar[43] states that many eczemas of unknown origin are caused by pityriasis rosea being irritated by treatment, and touches on its mechanico-chemical etiology. Havas[44] cites a case of herpes tonsurans maculosus with fungi of trichophytosis.

In 1894 Oro and Mosea[45] published a very exhaustive exposé of the entire question of pityriasis rosea. In 1895 Phillips[46] reports a case of nine months' standing complicated by jaundice. In 1896 Corlett[47] gives excellent points in differentiating this affection from syphilitic eruptions. Tandler[48] gives an exhaustive histologic report of the affection in question.

Sabourin[49] reports a case each of pityriasis rosea and trichophytosis cutanee, finding no fungus in the first, but finding it in the latter, and states that the two affections had nothing in common with each other. Kromayer[50] thinks it is caused by extraneous agents. In 1899 Rasch[51] writes on the topic, and Blaschko[52] points out that in pityriasis rosea there is exfoliation from the center to the periphery, while in psoriasis desquamation takes place from the periphery to the center. Fournier[53] regards it as a pseudo-exantheme of non-contagious character.

In 1900 Hollmann[54] and Loewenbach[55] render up-to-date histologic contributions, and Levallé[56] describes it as a constitutional affection like syphilis. Fiocco[57] regards it as of endogenic origin of toxic nature. In 1902 Sabouraud[58] furnishes an excellent histologic description.

ETIOLOGY AND PATHOLOGY.

The etiology of pityriasis rosea is considered uncertain. There is a tendency at present to regard it as a constitutional affection. The earliest observers thought it to be dependent on an arthritic or herpetic diathesis and classed it among the "arthritides pseudo-exanthematiques." (Gibert, Hardy, Bazin.)

A minority of observers, however, think it to be of mycotic origin. Hebra, Kaposi, Hans and Havas hold the eruption as identical with herpes tonsurans maculosus et squamosus, and consequently of trichophytic origin. Behrend and Weyl regard it as a parasitic disease of some kind. Vidal holds his contested microsporon dispar to be the causative factor, and Ferrari coincides with him. Bulkley and Lustgarten[59] lean towards its microbic origin, and think that all cases are not identical in their etiology.

The frequent coincidence of pityriasis rosea with gastric disturbances can not be ignored any longer or looked on as accidental. Excellent observers have recorded such a combination. Jaquet found it combined with gastric dilatation and cites Bouchard, who found pityriasis rosea five times in patients so afflicted. Feulard and Besnier attribute a causative influence to gastric dilatation, and Tenneson alludes to the fact that other dermatoses are also caused by gastrointestinal disturbances. Phillips have seen a case of nine months' standing, complicated twice by jaundice, and Allen[60] reports cases with acute or chronic digestive derangements, and also a case of an habitual drunkard, who had seven attacks, especially after swearing off, which seemed to disturb his digestive organs. Fordyce and Piffard[61] regard it as caused by a parasite of unknown origin. Fiocco states that in seventeen patients having had this affection the urine constantly contained peptone and indican and that its toxicity was greatly increased. Moingeard already regarded it as a general infection. Sherwell[62] in his cases noticed a rheumatic tendency and has seen it associated twice with the puerperal state. Fox and Jackson[63] regard it as non-parasitic. Stelwagon, Crocker, Hyde[64] look on it as a disease *sui generis*.

My cases also suffered from various chronic stomach disorders, and some of them reported having had acute gastric disturbances when the eruption first appeared. Besides this affinity between stomach disorders and pityriasis rosea, most authors concede the existence of systemic disturbances, due to some micro-organism, absorbed by the circulation and distributed on the skin (Crocker). The sudden outbreak, the character of the eruption, its non-contagiousness, its cyclic course, diffuse distribution, the mode of its appearance and its rare recurrence, all point toward the opinion that the disease in question is of endogenous origin, most probably transmitted to the skin by autointoxication. Although recurrences have been reported by Allen, Fiocco and a few others, yet this would not vitiate against the disease being of endogenous origin. In rare instances we find a recurrence of smallpox, or measles also, without questioning in the least their endogenic origin.

Those who yet believe in its extraneous causation deduce their views from observations contestable. According to Lassar, Hutchinson, Kromayer, it developed after the donning of new, unlaundered underwear, or from old

underwear that had been kept in ill-ventilated places. Their cases occurring mostly in the spring and fall when such a change in wearing apparel usually takes place, they look on pityriasis rosea as a seasonal disease of extraneous origin. Lassar reports a case where the pressure of a defective spring from a truss caused the eruption.

Kromayer has seen a case develop on both legs after putting on new stockings. Bulkley[65] observed a case in an attendant at a Turkish bath; so did Allen,[66] whose patient had a number of recurrences, though constantly undergoing steaming and washing of the surface. It can be seen from these few selections that a chemical or mechanical irritation, especially of textile fabrics, is looked on as an etiologic factor. Lassar has seen similar irritative conditions to cause or aggravate lichen, eczema or psoriasis.

To refute this assumption I may be permitted to state that irritation may cause, in persons so disposed, an eruption of some kind or resembling the one already existing. We all know the proneness of syphilitics to evolve on irritation kindred lesions to those already existing. Syphilis and irritation is a caption well known to us. The condition called urticaria factitia, where mechanical irritation of the skin provokes red elevations with pale centers, simulating symptomatic urticaria almost absolutely, is another instance of mimicry of skin lesions through outside influences. But we are not authorized to say that these mechanical irritations play the rôle of an etiologic factor. Here the vasomotor disturbance of the skin predisposes it to respond in this peculiar way and not the action of the finger nail or lead pencil which does the provoking scratching.

Some people may possess a latent disposition to develop pityriasis rosea, an eczema, a lichen or a psoriasis; they may in a manner have developed already—probably yet unnoticed—initial lesions of their kind, when a casual mechanical or chemical irritant will furnish the necessary impulse for the spreading of an already existing or the provocation for certain new lesions. Here, again, the disposition is the etiologic factor and not the provoking irritant.

I therefore think the theory that a chemical or mechanical irritant alone will cause pityriasis rosea to develop is untenable. Beside, in a case of pityriasis rosea recently observed by me, where an abdominal bandage was worn after an operation for appendicitis, it was just the area covered by this bandage which was devoid of a single lesion.

As to the cases of the bath attendants, I think the constant steaming and washing served as the provocative agent to these individuals so predisposed. A mycotic process would surely have yielded to the continuous cleansing procedures to which these people were exposed. Besnier[67] has shown that the most diverse pathogenetic elements may cause identical erythemas, a proposition which everyone of us has no doubt verified. Provocation of lesions similar to already existing parent lesions are frequently observed. I have repeatedly elicited lesions of lichen planus in patients so affected by a slight scratch of a needle.

As to the contagiousness of the disease, this has been thought of only in connection with a parasite ab extra. I have dwelt on this point in the etiology, but will mention a few more cases, which seemingly point towards the contagiousness of the disease.

Crocker[68] observed two cases in a family, Zeissler[69] in a husband and wife, Fordyce[70] in husband and wife and two sisters, Fox[71] in mother and child, but regards it as accidental; Johnston[72] in a boy 5 years old, where the throat showed eruptions identical with those of the skin, even to the scaling. The fact that different members of a family had the disease is not proof conclusive of its contagiousness. The few cases occurring in families are *nil* when compared to the promiscuous appearance of the disease in general. In families the same environment, the same food, similar habits prevailing, may cause similar diseases, without taking recourse to contagion. The disease is known to have occurred in small epidemics among people in different walks of life.

I had a series of cases within a comparatively small space of time; within the last two weeks of my service at the German Poliklinik five cases presented themselves for treatment. All of them complained of general and three of them of gastrointestinal disturbances before and while the eruption took place. In all of them the urine contained indican, but I could not find peptone as did Fiocco. Again, it is significant, in spite of the numberless examinations by the most competent men that the presence of a fungus has not yet been revealed.

PATHOLOGY.

Philippson[73] aptly maintains that, while according to the teachings of general pathology the propagation of diseases in the system is due to pathogenic substances carried through the blood, in dermatology this mode of propagation is rarely taken into account. In the pathology of exudative erythemas their vasomotor origin and angioneurotic character are usually emphasized. But it is equally true that the metastatic theory offers a more natural and tangible explanation. This is under certain restrictions true. It is the transmission of irritant substances to the skin, the alterations in the walls of the vessels that cause the erythema lesions. If pityriasis rosea be a skin affection of exogene (mycotic) origin, the irritation ab extra would surely cause a more active inflammation of the epidermis; but, being of endogene (toxic) origin, the mild changes in the upper strata of the skin are explained. The irritative substance on its way from the blood to the surface undergoes certain alterations, satisfies certain affinities, is attenuated, as it were. The process will invade the deeper strata of the skin first and, expending its force, the main lesions will be found there.

If pityriasis rosea be a mycotic disease, this external irritant would invade the upper strata of the skin first, causing there the main anatomo-histologic changes to appear. But this is not the case here, because the erythematous macule has its starting point from within outward. On the other hand, ringworm works its way from without inward. This conception of the evolution of pityriasis rosea makes the seeming incongruity of Loewenbach's studies better understood. He has found in pityriasis rosea, with its clinically mild symptoms, more profound histologic changes in the cutis than in ringworm of the body where the clinical symptoms and the epidermic changes are of a more formidable character. This means that the milder pityriasis rosea affection is combined with deeper histologic changes and the severer affection—ringworm—with milder ones. Of course, as the process advances, ringworm will show deeper histologic lesions also. And there will be a period where an older lesion of ringworm will histologically resemble a recent lesion of pityriasis rosea in the deeper structures.

It is of only secondary importance for our purpose whether this erythema is caused by vasomotor disturbances or by vessel alterations. The main factor is that

the maculæ of pityriasis rosea are of an erythematous character clinically as well as histologically.

According to my histologic findings, the local lesions of pityriasis rosea are caused by the alterations of the vessel walls, produced most probably by the circulating toxins. This is what Philippson has found to be the case in erythema. Török and Vas,[74] who also contest the angioneurotic origin of urticaria, maintain that erythematous alterations of the skin are nothing else than the reactive irritation phenomena of the vessels. I would add that erythema is the simplest kind of inflammation, an inflammation of a very mild type, a metastasis caused by the alterations of the walls of the vessels of short duration.

Pityriasis rosea shows clinically only congestive hyperemia of oval or circular maculæ of pale red color, shading off towards the center into yellowish red, paling on pressure; and histologically emigration of leucocytes, edema of the cutis and no perceptible change in the epidermis, with only slight furfuraceous scaling. While in the typical inflammations graver tissue and epidermic changes are present. Such lesions have a brighter color, do not fade on pressure, do not show the particular changes of hue in color; they show infiltration and desquamation on a highly inflamed basis. Mracek[75] remarks that strict proof has not been adduced yet whether an angioneurotic process can not eventually cause inflammatory changes in the skin.

In applying these enumerated characteristics to pityriasis rosea we must concede that the affection is of an erythematous character and, like all erythemas, of endogenous origin. The pathogenic substance may have been produced either in the system or carried into it from outward sources and then transported by the blood current into the capillaries of the skin. From these conditions erythematous lesions result.

SYMPTOMS AND DIAGNOSIS.

After what has been said previously little remains to characterize the symptoms of pityriasis rosea. The clinical picture presents at first small flat papules of variable size, out of which develop discreet, barely elevated, moderately irritable, oval or round maculæ. The color is of reddish or pale red or salmon tint, and paling on pressure.

Just the same as the histologic picture, so the clinical form and color differ with the age of the lesions. As the maculous circinate and annular forms present different evolutions of the original type, so the tint accompanying each stage will be different according to the age of the lesions. It will vary from a pale red or salmon to a dull reddish color of the fully developed lesion. Fading begins in the center, extending towards the margin and lending then a grayish tint, like milk-coffee to the vanishing eruption.

The margins of the lesions pass imperceptibly into the surrounding healthy skin. There is no vesiculation, exudation or papulation present. By peripheral extension and central subsidence the annular variety is produced.

But even this annular variety hardly shows a palpable border. The discs fade off in the center to a pink, and in the ringed variety, through central involution, a wrinkled or shriveling minutely radiated center is produced (plissé), which lies within an oval border of a roseate zone, lightly scaly towards the margin. This configuration represents Fournier's "medallions." About two weeks after the appearance of the "herald patch," the whole trunk becomes covered with innumerable spots, discs and circles; a profuse eruption like that of an exanthema taking place all over the body with the exception of the hands, feet and genitalia, which are almost never involved. Sometimes the maculous form alone supervenes, but mostly the macular circinate form is represented. The appearance of the eruption, however, does not always show this—so to say—classical type. In rare instances it shows up in a rudimentary way, exhibiting only scarcely visible spots of dull red macule, especially in the axillary regions. I have seen a case of follicular involvement, somewhat greasy to touch, resembling eczema seborrheicum. At first the lesions do not show any scaling, but later fine furfuraceous scales appear. *On scratching a recent not yet scaling patch with the finger nail, invariably some scaling can be produced in its center, which is the more surprising, as there was apparently not the slightest indication of such.* I regard this sign as *pathognomonic*, as I could not elicit it in any other lesion of an erythematous character. With its help we were enabled in our class to diagnose the eruption in its earliest stages, verifying it later in every instance. The explanation for this strange condition is found in the histologic change of the rete cells. The slight intercellular compression which the edema exerts on the succulent rete cells is not strong enough to cause desiccation of them in their upward move. Later, when a more abundant parvicellular infiltration has taken place, the regeneration of the epidermis cells and with it their desiccation and following desquamation will be a livelier one and a spontaneous desquamation will ensue.

A very useful help to diagnosis is the "herald patch," "plaque primitive" of Brocq, "plaque maitresse" of Besnier, our primary or parent spot. This is a hyperemic disc with a tawny yellowish center, of various dimensions, from the size of half a dollar to several inches in diameter. However, it is not present in every case. But, as it appears about two weeks before the general eruption breaks out, and as patients rarely present themselves before this time, there is a strong possibility of its being overlooked. I have seen it only twice in fourteen cases; once under the right clavicle and once in the left epigastric region. Allen[76] observed it occupying the whole chest wall. Behrend under left clavicle, assuming an annular form, and on the left sterno-mastoid region. Fournier on left forearm. Fordyce on abdomen, etc.

This primary lesion, appearing two to three weeks before the general eruption sets in, lends the disease, as to its evolution, a resemblance to syphilis. It has a primary lesion, an acute course, spontaneous involution and is often associated with slight systemic disturbances, like rise of temperature, anorexia, etc.

One of my cases presenting itself at my class, and in which the face was also affected, showed quite grave catarrhal symptoms—conjunctivitis, coryza, puffed face, reddened tonsils and swollen cervical glands accompanying the acute development of the affection. These acute symptoms usually cease as the eruption has established itself. But, in most of my cases, I have heard complaints of lassitude and more or less discomfort up to the time when the eruption commenced to fade away. Itching did not annoy my cases enough to complain of it.

I will only mention a few of my cases cursorily:

CASE 1.—J. M., 22 years old, presser, presented himself at the German Poliklinik with an eruption showing dissemination over trunk, arms and legs, including face, of rosy spots and circles, not raised over the level of the skin, with slightly furfuraceous scaling. The youngest maculæ do not show scaling, but slight desquamation can be elicited by scratching. Complains of general malaise, face somewhat puffed, eyes suffused from a conjunctivitis. Microscopic exam-

ination revealed no fungus, only the common microspores of the skin.

CASE 2.—L. M., 26 years old, private patient, traveler, healthy looking individual. Shows general eruption of a macular and circinate form on the trunk, front and back, on upper thighs, and a few on the crures. Face not involved; pretty lively desquamation. The very intelligent patient complains of lassitude before and since the outbreak of the eruption. He distinctly remembers having had stomach and

Fig. 1.—X 125. Showing spindle cell inflammation around vessels in the papillæ and also lower down in the cutis, edema in rete fairly well preserved, stratum granulosum, and separation of cells in stratum corneum.

intestinal disturbances previous to the appearance of the eruption. No fungus found. Remembers herald patch under left clavicle about ten days before eruption.

CASE 3.—L. B., 24 years old, upholsterer. When presenting himself at my class, he had the eruption for three weeks, disseminated over the whole body down to the ankles, also on face. On neck, coalescing maculæ and segments of rings, very

Fig. 2.—X 125. Showing spindle cell inflammation around small vessels in a papilla, and the vessel filled chiefly with white blood cells. The entire epidermis is well preserved.

irritated—most probably from collar—raised and accordingly very scaly. This case exhibits the most abundant desquamation in all my observation. Patient has a few maculæ on buccal lining, distinctly characterized by their redder appearance from the surrounding mucosa. No syphilis. Very light smoker. Remembers no herald patch, but complains of chilly sensation, loss of appetite and weakness, which enables him to work only half time. When the eruption appeared he had a sore throat, whether coincidentally or not can not be decided. No fungus.

CASE 4.—A. M., 36 years old, teacher. Presented himself at my class and shows a general maculous, only rarely gyrated eruption of three weeks' standing, disseminated especially on chest down to the pubis and on back. Face not involved, neither are extremities. Slight itching. Remembers herald patch to the left of the navel about four weeks ago, which he

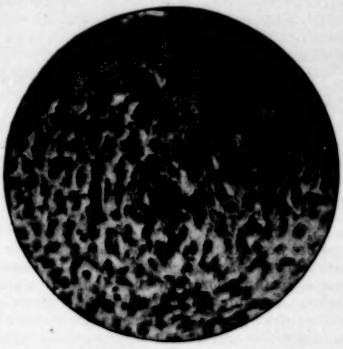

Fig. 3.—X 350. Shows how the products of inflammation in the papillæ break through into the corium. The intercellular edema is very marked.

thought to h of no further consequence. About two weeks ago he felt general malaise and, as his children were down with measles and his throat was somewhat irritated, he had himself examined elsewhere and found, to his dismay, an eruption which was thought to be measles. On examining him, I found no temperature, no cough, no other objective symptoms besides the eruption, which was vanishing in some and appearing in other places. Some furfuraceous scaling. On macule not yet scaling, such can be elicited as usual by scratching with finger nail. Beside slight itching, no subjective symptoms. No fungus.

Fig. 4.—X 350. Shows how fine exfoliation takes place which appears as scales clinically, stratum granulosum not much altered, prickle cells and intercellular edema; inflammation in the papillæ.

I will not enumerate any more cases, of which I had fourteen in my service and two in private practice within four months, as they do not show any aberration from the well-known clinical features. When possible, a piece of skin was dissected and histologic examination was made. From the scales, cultures were sown out, which, however, in every case proved to be negative.

MICROSCOPIC REPORT OF PITYRIASIS ROSEA.

1. The examinations of scraping (epithelial scales) from the eruption proved absolutely negative as to the finding of any fungi, both by the direct examination of the scales and by cultural methods on potatoes, bread and water, nutrient agar, etc.

2. The examination of sections made from the extirpated tissue did not reveal the presence of any fungi when stained according to the most approved methods of Waelsh, Unna, Sahli, etc.

3. The histologic examinations of the specimens seem to give much more information as regards the pathology of the disease.

The picture is one of an inflammation, characterized by a proliferation of spindle cells around the blood vessels in the cutis, besides the ordinary change of a mild exudative inflammation, viz., emigration of leucocytes, exudation of serum and diapedesis. (Fig. 1.)

In the early stage of the disease (macular eruption) this spindle cell formation can already be noticed around the blood vessels. (Fig. 2.) In the more advanced stages this spindle cell formation is very characteristic. As this process takes place around all the small-

Fig. 5.—X 123. Herpes tonsurans corporis. Shows great changes originating in epidermis, with secondary round cell infiltration just beneath corium. (*By courtesy of Dr. Max Joseph, Berlin.*)

er vessels, it is at once evident how the corium becomes broken and infiltrated in many places, as the small vessels in the cutis run up in the papillæ just to underneath the corium. (Fig. 4.)

The consequence of all this is that the cutis and epidermis become edematous and appear very loose and succulent. (Fig. 4.)

In the epidermis the cells in the rete appear succulent and the lymph spaces enlarge. The stratum granulosum is well preserved except in a few places.

The stratum corneum is also edematous and the result is that there is a separation of the individual cells. This accounts for the fine exfoliation clinically. There is no tendency to the formation of vesicles. (Fig. 5.)

As the disease is not a localized one in the true sense of the word, but really a general eruption, I am inclined to look on the same as one which is due to some irritant which is brought to the periphery from within the body, the same as in erythemas, and therefore regard the condition as an erythematous disease.

To define the microscopic picture, I would say that we have a mild subacute exudative inflammation, affecting chiefly the cutis and tending toward resolution.

I will show you the micro-photograms of the specimens later, which will conclusively show their anatomo-histologic character and secure for the affection a place among the idiopathic erythematous eruptions.

DIFFERENTIAL DIAGNOSIS.

The disease with which it is most frequently confounded is the *disseminated ringworm* of the body. This is due more to a certain preoccupation and bias than to actuality, because there is no more identity between the two affections than there is between varicella and pemphigus, or between measles or a maculous drug eruption. The gross form looks somewhat alike, that is all. Herpes tonsurans maculosus and circinatus, if it should begin with a large solitary spot, will differentiate itself from the "herald patch" by its more clearly defined hyperemic outlines, its raised margin and the regularity of its circle. There is slight vesiculation around the borders and the papular element is more pronounced. The circinate ringworm does not start from so many centers and does not show symmetry and never breaks out so suddenly and profusely. As an auxiliary I may mention that circinate ringworm likes the region of the dorsum of the wrist, the region under the chin, the sides of the throat. The center of a ringworm patch which has extended towards the periphery recovers and looks normal, not wrinkled and tawny, as in pityriasis rosea. The hairs are always affected in ringworm; never in pityriasis rosea. The patches of ringworm extend centrifugally very rapidly; in pityriasis rosea they are more fixed. And last, but not least, the fungus of the trichophyton tonsurans can be found in every case, while it has never been found in our affection.

I firmly believe, as a pupil of the great Hebra and with due reverence to his master genius, that had he lived to see the evolution of our etiologic knowledge, he would have been the first in his high-minded integrity to recede from an untenable position and declare his cases of herpes tonsurans maculosus et squamosus to be what they really are—a diffuse erythemato-squamous systemic affection.

The other diseases with which pityriasis rosea could be confounded I can dismiss with greater dispatch. From *seborrheic eczema* it differs in its distribution. Here, too, the border is more raised, the lesions show a deeper infiltration, the scaling here is a more prominent symptom, the lesions are of a brighter red and have a peculiar fatty, greasy touch.

I have found seborrheic eczema to spontaneously yield scales, even in places where it is exposed to maceration, *while pityriasis rosea will do this only when scratched.* While common on trunk, its predilection of site is on center of chest and back. I have found associated with it extensive seborrhea of the scalp and a hyperemic and scaling corona seborrheica on hairline border, either entirely encircling the head or partially so, and then mostly on post-auricular or temple region. The individuals so affected are mostly anemic and exhibit the peculiar shiny greasy-gray aspect of their skins with slight general pityriasis. Furthermore, there is no such sudden development as in pityriasis rosea.

As to *roseola syphilitica*, the distinguishing points are many. And yet, men like Vidal and Fournier confess to having mixed up pityriasis rosea with it, and that only the characteristic medallions helped them to make a diagnosis. It is with the *early syphilide* and not with

the later manifestations with which it is most frequently confounded. Many lightning cures of alleged syphilis are attributed to the skill of the medical attendant and the administration of mercury, where nothing else than a natural involution of pityriasis rosea lesions has taken place.

The macular syphilide is also a general eruption, but it is redder and does not show the roseate hue of pityriasis rosea. Neither is the salmon color of the center present, nor does its center clear up at all, but the whole lesion fades away simultaneously without forming circles. In the syphilitic lesion the papular element is more pronounced; there is clinically and histologically a higher type of inflammation present. Scratching of a macule with the finger nail does not elicit, like in pityriasis rosea, fine furfuraceous scaling; neither is there spontaneous scaling present. In the late secondary annular syphilide we find the lesions absolutely elevated above the surface of the surrounding skin, infiltrated, of high red color, but scaling very scarce and elicited only with difficulty by scratching. Although exceptional, the throat may be slightly affected in pityriasis rosea—in syphilis we will always find acute disturbances of the buccal mucosa and tonsils and involvement of the glands. These points will suffice for a diagnosis, even if a history of syphilitic infection is wanting.

I may mention as an auxiliary that I have found that syphilitic efflorescences, when touched with the finger nail, always make the patient complain of pain, while on the normal skin, or in other erythematous eruptions, this interference is not felt at all.

From *psoriasis* it is easily distinguished, when the latter is well developed. A confusion can occur only in the recent punctate lesions in persons who are perspiring abundantly, or in summer, when the lesions naturally are moist. But, on scratching, we have here the punctate hemorrhages. The topography of the lesions—extensor surfaces involved with predilection—must be taken into consideration. In the so-called atypical psoriasis with anomalous localization, or in those cases where the scales do not show the white mortar-like brittle characters, but only soft, greasy, grayish-white scales of eczema seborrheicum psoriasiforme, the diagnosis may be doubtful for a moment. But here, too, the absence of a herald patch, the polycyclic evolution, the scaling, the amount of which in these atypical cases even far exceeds the most abundant scaling of pityriasis rosea, will soon clear up the diagnosis which, I am sure, will but rarely if ever confront the dermatologist.

TREATMENT.

There is hardly a necessity for such. Against the general malaise, a saline cathartic; against the anorexia or other gastric and intestinal disturbance, the exhibition of diluted muriatic acid and nux vomica will be in order. If itching is complained of, bran baths and mild salves, probably with the admixture of salicylic acid or resorcin, are to be recommended, or spirituous lotions of the same drugs may be applied.

The much-vaunted influence of higher percentuated salves with salicylic acid, resorcin, sulphur, naphthol, with a view of their parasiticidal virtues, is absolutely *nil*. There is no fungus to kill in this affection, and whatever changes these salves may elicit on the skin—bleaching and desquamation—are due to their reductive qualities of the remedies incorporated in them.

In the foregoing I have tried to add a modest mite towards the elucidation of the pityriasis question, the place of which dermatosis in the system, I hope, will soon be established beyond a reasonable doubt.

In conclusion, I wish to express my thanks to Dr. Henry Kreuder of New York City for his valuable assistance in preparing the accompanying microphotographs and histologic examinations.

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BIBLIOGRAPHY.

1. Erasmus Wilson: On Diseases of the Skin; a System of Cutaneous Medicine. Seventh American, from the Sixth and Revised English Edition. Philadelphia, Henry C. Lea, 1868, p. 185.
2. Bazin: Les Affections Genériques de la Peau. Paris, 1862, p. 331.
3. Hardy: Lecons sur les Affections Cutanées Dartreuses, 2d Edition, Paris, 1868.
4. Gibert: Traité Pratique des Maladies de la Peau. Paris, 1860, 3d Edition, p. 402.
5. Louis A. Dühring: Pityriasis Maculata et Circinata. American Journal of Medical Sciences, October, 1880, p. 359.
6. Ferd. Hebra: Lehrbuch d. Hautkrankheiten. Stuttgart, Ferd. Enke, 1876, p. 635.
7. Horand: Notes sur servire a l'Histoire du Pityriasis Circiné. Annal. de Dermat. et Syphil., 1876, Tom. vii, v Serie, p. 352.
8. Vidal: De Pityriasis. Progress Med., 1877, v, p. 685.
9. Metton: Etudes sur la Pityriasis Rosé. Thèse de Paris, 1877.
10. L. J. Nicolas: Du Pityriasis Rosé ou de la Roseola Squameuse. Thèse de Paris, 1880.
11. E. L. Oatman: Case of Pityriasis Rosea in an insane subject. Archiv. Dermat., New York, 1881, vii, p. 290.
12. Behrend: Ueber Pityriasis Rosea Maculata et Circinata (Bazin). Berlin. Klin. Wochenschrift, 1881. Nos. 38-39, p. 552 et seq.
13. Vidal: Du Pityriasis Circiné et Marginé, Description de son Mycoderme, le Microsporon Anomoen (dispar). Annal de Dermat. et Syphil., January, 1882, 2 s., iii, pp. 22-28, 1 pl.
14. Hans Zur: Frage der Selbstständigkeit d. Pityriasis Rosea (Gibert). Berl. Klin. Wochenschrift, 1882, No. 17.
15. Weyl: Zur Selbstständigkeit d. Pityrias. Rosea. Berl. Klin. Wochenschr., 1882, xix, p. 495.
16. Behrend: Bemerkungen zum Aufsatz des Dr. Weyl über Pityr. Rosea. Berl. Klin. Wochenschr., 1882, p. 529.
17. W. A. Jamieson: Pityriasis Maculata et Circinata. Brit. Med. Jour., 1882, i, p. 817.
18. Colcott Fox: Pityr. Maculata et Circin. Lancet, Sept. 20, 1884.
19. Chapard: La Roseola Squameuse dans ses diverses formes. Thèse de Paris, 1885.
20. Kinnier: Case of Pityr. Maculata et Circinata. Jour of Cut. and Ven. Dis., 1885, p. 102.
21. Ferrari: Sulla Etiologica della Pityr. Communic. to the Academy of Catania, July 20, 1885.
22. Blanc: Two Cases of Pityr. Rosea. New Orleans Med. and Surg. Jour., 1885, 6 N. S., xiii, p. 813.
23. Pityr. Rosea Macul. et Circ. Transactions New York Dermat. Soc., Jour. of Cut. and Ven. Dis., 1885, p. 204.
24. Besnier: Note sur deux Cas de Pityr. Rosé, Observez chez des Sujets Atteints de Dilatatio Gastrique. France Medicale, 1886, i, 981; and Bull. Soc. Clin. de Paris, 1886, p. 81.
25. Brocq: Note sur la Plaque Primitive du Pityr. Rosé de Gibert. Annal. de Dermat. et Syphil., 1887, 2 S., viii, p. 615.
26. Pemper: Congress of Italian Phys., Pavia, 1887.
27. C. Bock: Pityr. Rosea. Norsk. Mag. f. Laegevidensk, Christiania, 1888, 4 R., iii, p. 813.
28. P. G. Unna: Monatshefte f. pract. Dermatol., 1888, p. 684.
29. Giordani: Roseola Pityriaca. Giornale Ital. delle Malattie Venere della Pelle, 1889, p. 159, Milano.
30. Moingeard: Etude sur le Pityr. Rosé de Gibert. Thèse de Paris, 22 Juillet, 1889.
31. Jaquet: Annal. Dermat. et Syphil., 1889, p. 338.
32. Besnier: Pityr. Rosé de Gibert, Exam. histolog. Annal Dermat., et Syphil., 1889, p. 108.
33. Fournier: Pityr. Rosé, de Gibert. Annal. Dermat. et Syphil., 1889, p. 879 and Pityr. Rosé, Variete Prolongé. Annal. Dermgt. et Syph., 1889, p. 25, 108 and 338.
34. Feulard: Pityr. Rosé de Gibert; Dilatation de l'estomac. Annal. Dermat. et Syphil., 1889, p. 459 and Monatshefte f. pract. Dermat., Bd. x, 1890, and Reunion Clin. Hebdomad. des Medic. de l'Hopital Saint-Louis, 1889.
35. Haslopeau: Annal. Dermat. et Syphil., 1889, p. 833.
36. Düring: Monatshefte f. pract. Dermat., Bd. ix, p. 141.
37. Mracek: Ber. d. Kranken Anstalt Rudolfs Stiftung, Wien, 1889.
38. Thibierge: Le Pityr. Rosé de Gibert; Gaz. Hebdom. de Med., 1890, p. 612.
39. Köbner: Monatsh. f. pract. Dermat., Bd. ix, 1890, p. 141.
40. Moingeard: Reunion Clin. Hebdomad., 1891, and Annal. Dermat. et Syphil., 1891, p. 833.
41. Tenneson: Pityr. Rosé de Gibert. Reun. Clin. Hebdomad. and Annal. Dermat. et Syphil., 1891, p. 859. Also, Un case de Pityr. Rosé. Bull. Soc. France de Dermat. et Syphil., ii, p. 419.
42. Lefevre: Report of a Case of Pityr. Rosea with Remarks. Cincinn. Lancet-Clinic, 1891, N. S., xxvii, Aug. 15.
43. Lassar: Ueber die Natur d. Pityr. Rosea. Deutsche Med. Wochenschr., 1892, p. 469.
44. Havas: Ungar. Aerzte Ver., 19 März, 1892, Monatsh. f. pract. Dermat., Bd. xiv, 18192, p. 356.
45. Oro e Mosea: Sulla Pityr. Rosea de Gibert. Richerche Cliniche, Anatomo-Histologiche, Batteriologiche e Sperimenta e, con Tavola Litlographiche. Commentario Delle Malattie Cutanee e Gen. Urin., 1894, 2 3, p. 98.
46. Phillipps Leslie: Pityr. Rosea, with Some Unusual Features. Brit. Med. Jour., 1895, i, p. 254.
47. Corlett, W. T.: A Case of Pityr. Macul. et Circin. Cleveland Med. Jour., 1896, i, p. 118.
48. Tandler, G.: Ueber Pityr. Rosea Gibert. Arch. f. Dermat. u. Syphil., 1896, 37, p. 126.
49. Sabourin: Medicina, 1897, 6-7.
50. Kreunayer: Pityr Rosea durch neue Strümpfe. Dermat. Zeitschr., 1897, iv, p. 709.

51. Rasch: Hosp. Tid. Kjöbenh., 1898, 4 R., vi, p. 1071.
52. Bleschko: Zur Histologie d. Pityr. Rosea. Monatsh. f. pract. Dermat., Bd. xxix, 1899, p. 173.
53. Fournier: Pityr. Rosé. Independ. Med., 1899, p. 233.
54. Hollmann: Arch. f. Dermat. u. Syphil., 1900, B. li, p. 229, mit 3 Tafeln.
55. Loewenbach: Wiener Klin. Wochenschr., 1899, p. 23.
56. Levallé: Pelade, Zona, Pityr. Rosé. Jour. de Med. Int., Paris, 1900, iv, p. 741.
57. Flocco: Padua, 1900. Tipogr. Cooperativa. Monatsh. f. pract. Dermat., Bd. xxx, 1900, p. 431.
58. Sabouraud: Notes sur Histol. de Pityr. Rosé. Revue pract. d. Med. Cut., 1902, i, p. 53, 2 pl., 5 fig.
59. Jour. of Cut. and Gen. Urin. Dis., 1896, p. 355.
60. Jour. of Cut. and Gen. Urin. Dis., 1896, p. 356.
61. Ibid.
62. Ibid., p. 355.
63. Ibid.
64. See their text-books.
65. Jour. of Cut. and Ven. Dis., July, 1885, p. 205.
66. Jour. of Cut. and Gen. Urin. Dis., September, 1896, p. 356.
67. Besnier: Pathogenie des Erythemes. Annal. Derm. et Syphil., 1890, and Besnier et Doyon Translat. of Kaposi's Book.
68. Crocker: Dis. of the Skin, 2d Ed., p. 288.
69. Zeissler: Jour. of Cut. and Gen. Urin. Dis., 1893, p. 494.
70. Ibid., 1896, p. 356.
71. Ibid., 1898, p. 340.
72. Ibid., p. 340.
73. Philippson: Ueber Embolie und Metastase d. Haut. Arch. f. Dermat. u. Syphil., Bd. li, p. 33.
74. Ueber Eiweissgehalt des Inhaltes verschiedener Hautblasen, etc. Festschrift Kaposi, 1901.
75. Mracek: Handbuch d. Hautkr. Wien, 1902, iv. Abthellung, p. 535.
76. Allen, C. W.: International Clinic., Phila., vi, S., 1897, p. 342.

DISCUSSION.

DR. HENRY G. ANTHONY, Chicago—I am perfectly familiar with pityriasis rosea and its diagnosis, and I have looked on it for a considerable length of time as a rare form of disease in my practice, but during the past year I have seen a number of cases, and discussing the subject with other dermatologists in Chicago have learned that there are a number who agree with me that the disease is decidedly on the increase and that we are now seeing more cases than ever before.

I have always looked on the disease as parasitic. Of course, in the present stage of our knowledge of the disease nothing can be said definitely in regard to this.

The result of treatment I do not lay any stress on because I have never treated it internally, my medication has always been external and the duration of the disease has always been possibly as it would have been without treatment.

As to the spot of origin, I always look for that, and in two cases recently have found it between the scrotum and the thigh. That is a location which is not usually mentioned.

DR. L. DUNCAN BULKLEY, New York—I was surprised at Dr. Weiss' mention of the frequency of this disease; it seemed to me greater than I have observed, although I see cases of it all the time. I think it most absurd that Hebra should ever have called it a diffuse ringworm. It is the most stupid thing we ever had from the Vienna School, and beyond question it has caused confusion in the minds of some people. For two or three reasons I have always been led to regard pityriasis rosea as a microbic disease. In nine cases out of ten the development is from above downward, commencing on the shoulders or neck and developing down rather than upward, which is the history of most parasitic diseases. The ringworm-like spread of the eruption has always seemed to me distinctly indicative of a parasitic element, although we have never yet identified any microbe or produced it by inoculation.

One gentleman has spoken of the treatment. I think it disappears with the use of bichlorid. No eruption of urticaria will disappear as a case of pityriasis rosea disappears under the proper use of bichlorid of mercury. I have never found constitutional treatment do any good.

DR. A. W. BRAYTON, Indianapolis—I can recall on my fingers the cases I have seen. I have been inclined to look on it as a cutaneous expression of an infective disease like scarlet fever or other members of the cutaneous exanthemata. I recall a girl of 20, in excellent health, the first case I ever saw; the others occurred in a group, one might say. I saw no more cases until within two years. I recall a healthy man of 35 or 40, next a young physician of 26 or 27, an optician of 50 years, and a healthy woman with a child five or six months old, which she was nursing. Three of these cases were promptly diagnosed as syphilitic eruptions. None of the persons was sick. I have seen six cases in my practice in Indianapolis in the last ten years, and all have been well marked, and there has been no difficulty in the diagnosis. In only one case did I determine the antecedent primitive patch on the trunk. The cases occurred in married people; there was appearance of the disease in the husband or wife of those affected.

DR. M. L. HEIDINGSFELD, Cincinnati—I am very much interested in this exhaustive and well-prepared paper, as well as the investigations of Löwenbach and a few of the other authorities mentioned. I have always felt a little skeptical in regard to the finer shades of differences which Löwenbach and others have attempted to draw between herpes tonsurans maculosus et squamosus, and pityriasis rosea. I have endeavored to confirm for my own personal satisfaction, from carefully selected cases, the pathologic differences, but have failed to note the distinguishing characteristics. I must also beg to differ with the essayist on purely clinical grounds, that pityriasis rosea has an internal pathogenesis. The fact that a fungus can not be detected in the scales under the microscope, means practically nothing. Cases of unquestioned herpes tonsurans frequently fail to show fungi. In selected cases, you may even start a dermatosis with a fungous inoculation, and though the dermatosis may continue to spread, the fungus may soon disappear, so that its presence can no longer be detected. Not only the action of the parasiticides, but also its usual origin and spread from a single patch, besides a mass of other clinical data, speaks strongly for its external nature and extraneous origin. I believe the burden of proof is strongly in favor of its external origin, and in the effort to establish an internal cause, if we invoke to our aid the sympathetic and vasomotoric systems, we are casting aside very plain and almost definite evidence for theories that are, I believe, at best, vague, indefinite, illusory.

DR. JOHN A. FORDYCE, New York—Dr. Weiss quotes me as favoring the parasitic origin of this disease. I made a statement some time ago in the Dermatologic Society to that effect, based on an observation of two cases in one family, two sisters who occupied the same room, and, I think, the same bed. That is the only instance I have had in which I could find evidence of contagion. I have observed in the last two months two cases of pityriasis rosea with atypical distribution where the lesions were chiefly on the extremities, the trunk being only slightly involved.

DR. LUDWIG WEISS, New York—I know there is a difference of opinion as to the pathogenic origin of this disease. Is it not strange that with our well-developed methods of investigation, finding bacilli everywhere, in this disease we are not able to find anything outside of the micrococci of the skin? Why can not we find the causative microbe in the scrapings? Why can not we find it in excisions and staining? The eruption appearing in families seemingly points toward its contagiousness. I have extensively dwelt on this point. Our colleague, Dr. Zeisler, and Mrs. Zeisler had it ten years ago, and at that time Dr. Hyde and other gentlemen, in discussing these cases, said there was a question whether it was parasitic or not. It was not decided, but most of the gentlemen present said it was a disease *sui generis*. The evolution of the disease from above downward is not a criterion, I think, inasmuch as we have heard from Dr. Fordyce that it appears primarily on the thighs also. A parasitic disease will not come out from so many centers as pityriasis rosea does. You will see by the photographs that it develops over the whole body. In these lesions the borders are not raised, and you will not find any microbes in the scrapings. Why does the microbe, if present, disappear on the body, and why is it so tenacious when it appears on the scalp? It is strange that the same microbe should behave so differently in different parts of the body. As to general malaise and gastro-intestinal troubles, there is no doubt that they occur coincidently, and this shows it is some systemic disturbance that causes pityriasis rosea, and that it belongs to the erythematous diseases.

As to the differential diagnosis, Fournier himself confesses to having treated a case once, thinking it was syphilis. It is really no reproach for us to say that we are in doubt, although I do not think any dermatologist will have it, because outside

of the general history of syphilis there is one pathognomonic symptom I would again like to emphasize. If you scratch with your finger nail a very recent lesion which appears red, you will, even on a perspiring skin, immediately elicit fine scales. This is a symptom you will not find in any other erythematous disease and never in the erythematous syphilid. We have tried it dozens of times, and it helped us in the diagnosis always.

The bichlorid solution does a great deal of good; it relieves congestion and causes exfoliation of the skin. From this circumstance I would not say that the eruption is necessarily parasitic. As it stands now I think the general opinion is against its parasitic nature. I think I was able to show in these micro-photographs that the disease commences in contradistinction to the parasitic affections in the lower strata of the skin.

INFLUENZA IN CHILDREN.*

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CHICAGO.

It is the writer's conviction that influenza is a more malignant malady in children than is generally acknowledged (a conviction fortified by his own experience and further strengthened by material gathered among his friends and from the literature), which has led him to venture this paper.

Without being able to furnish much, if anything, that is new on the subject, it yet seems justifiable here to emphasize some of the manifestations and possible calamities which may be traced to this disease.

Influenza vera, when the victim is a child, differs from the same disease in adults in proportion to the difference in constitution, vital resistance and recuperative power. It should not be forgotten in this connection that the disease is of a markedly toxic nature. The admirable article in Ashby and Wright's work states, however, that children are less likely to have some of the ordinary symptoms, such as backache, rigors and pain in the limbs, and more likely to earache, glandular swellings and a cough resembling whooping cough. The latter is also mentioned by Forchheimer. Blackader likewise states that the invasion in children is more often insidious and slow than in adults. These statements seem to be borne out in our experience. The very multitude of its manifestations, with the ensuing difficulty in accurate diagnosis, has so confused our statistics on influenza as to render many of them misleading; yet we are probably in greater danger of under- than of over-estimating its gravity.

Washburn and Ayre report 12 cases of death from pneumonia in children, of which the autopsies showed the Canon-Pfeiffer bacillus present as the main factor in the disease in 8 of them, though previously unrecognized.

Dr. F. E. Wynekoop, of the Chicago Department of Health, in a personal interview, stated that of the 2,460 examinations made just previous to the interview of cultures from throats in cases of suspected diphtheria, 677 showed the Canon-Pfeiffer bacillus as the only pathogenic organism, while of these 677 cases, in 173 the diagnosis of diphtheria was definitely made from the clinical findings—yet the Klebs-Loeffler bacillus was not present.

Age appears to have no influence on the susceptibility of the individual, and, while very young infants are somewhat less frequently attacked, there is some question as to whether it may not be due to better protection rather than to natural immunity. In fact, there is nothing either in the literature nor in my own experience which warrants a belief in the existence of a complete natural immunity. The question of susceptibility would, therefore, appear to be one of the comparative degree to which different constitutions succumb to the disease—one child may have a so-called mild attack followed by recovery in a few days, while a brother or sister may be sick one or two months or longer. Much depends on the state of vital resistance of the victim, as in other diseases, but even more, in the writer's estimation, on the previous health of the mucous membranes. In a series of some fifty cases showing some of the more serious manifestations, he has rarely failed to obtain a definite history of indigestion, constipation, a common cold or some other previous disturbance of the mucous membranes.

Owing to the almost universal dissemination of the pathogenic organism during an epidemic, there is comparatively little possibility of accomplishing much in the way of prophylaxis at such times. And yet, because we know that the disease may be conveyed by contact, we should insist on such precaution as can be enforced to prevent this. Children should not be exposed to the contagion in the persons of other members of the family, nor sleep in illy ventilated rooms, nor breathe the vitiated air of public rooms and conveyances. Neither should they be allowed to risk contracting ordinary catarrhal "colds" from exposure. Mothers should be warned not to neglect attention to the children's bowels, and to allow them all the fresh air possible. Thus they may be enabled to resist and defeat an attack which might otherwise prove serious from this all too powerful enemy.

The division of the disease into various types for separate consideration is more or less arbitrary. The truth of the matter is, regardless of how the division is made, that every case one sees is of a mixed type. In other words, it is a case of influenza, and not of catarrh or neurasthenia—a specific infection, giving rise to various symptoms of which sometimes one, sometimes more than one, may be prominent, but of which a number are invariably present.

Those cases in which catarrh figures as the most conspicuous indication are perhaps more frequently met with. Starting with a rhinitis, or rhino-pharyngitis, the inflammation may spread either to the respiratory or alimentary tracts, or both. Wherever there is mucous membrane we may have this inflammatory reaction excited by the activity of the Canon-Pfeiffer bacillus. Thus we may find our little patients suffering from a rhinitis, a conjunctivitis, an otitis media, an inflammation of the accessory sinuses or of the pharynx, larynx, bronchi, lungs, stomach or bowels. The seat of choice for the severer forms of the infection is doubtless influenced greatly by the comparative resistance of the mucous membrane in various localities. The more nearly normal and healthy the membranes the fewer will be the grave manifestations of the disease. Hence the previously mentioned warnings in regard to the matter of prophylaxis.

The catarrhal manifestations of the disease appear, then, to be due mainly to the micro-organism itself. On the other hand, the nervous and circulatory and febrile types may be regarded as of toxic origin. The Canon-Pfeiffer bacillus, as in the case of that of Klebs-Loeffler, produces an exceedingly active and deadly toxin, capable not only of overpowering the vital organs, but of actually destroying their structure, to some extent, through degeneration. This being so, one can readily

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

see how multiform in appearance and how serious in extent may be the history of such cases. One need not read far into the literature of the subject to find them reported by careful observers, of meningitis, multiple neuritis, hemiplegia, neurasthenia and various mental disturbances—of endocarditis, pericarditis and myocarditis, arteritis, hemorrhagic nephritis and various other anomalies of the circulation with their consequences. Professor Monti of Vienna adds to these a glandular class, which includes those cases in which the lymphatic and other glands are chiefly involved, with a minimum of other clinical findings. I have included this class because I have known of several cases which would fall therein.

A form of the disease, until recently too little considered, is the chronic form, first described by Filatow. Cases have since been reported by Lord, Finkler, Wassermann, Ortner and others, where as high as 60 per cent. of cases having chronic cough, for instance, were caused by influenza bacillus, as proved by bacteriologic examination, in many instances it being found in pure culture.

Relapses and sequelæ during apparent convalescence are common, particularly the former. One can never be certain even when the child is to all appearances entirely restored to health that no sequels will follow. The writer has in two or three instances seen grave troubles develop days after recovery seemed complete.

The case reports which follow have been chosen without any attempt at covering the field. Aside from their individual interest, however, they indicate how widely divergent may be the chains of symptoms in disease traceable to the Canon-Pfeiffer bacillus, as well as the severity to which they not infrequently attain. It will be noticed that they are all more or less difficult to classify according to any of the rules laid down in different text-books.

CASE 1.—Baby W., aged 5 months, was taken ill in February, 1900, with what seemed a mild attack of influenza. The attack was, however, followed in four or five days by a bronchopneumonia, which ran an apparently typical course. As convalescence from this occurred, it was noticed that the child refused all food and even water. Examination of the throat revealed a highly inflamed catarrhal pharynx and fauces. Bacteriologic examination showed the characteristic influenza bacillus in large numbers. The angina and attendant dysphagia continued, in spite of all local and constitutional treatment, for so long a time that the child was in apparent danger of immediate starvation. There was also a middle ear complication. The little patient gradually developed decided symptoms of rachitis, which persisted until she was taken into the country in June of the same year. She did not regain the normal strength of children of her age until after she was a year old.

CASE 2.—M. C., aged 4 years, had a severe primary attack of influenza, verified by culture, in January, 1902, involving the middle ear and mastoid cells. The latter, however, never became suppurative and gradually responded to treatment—leeches, icebag, etc. Though the tympanic membrane was punctured three or four times, no pus was ever obtained. When the local trouble had subsided, the temperature still remained above normal, ranging mostly from 101 to 102.5, sometimes after exertion rising to even 104. A careful physical examination revealed a heart murmur, heard most plainly near the base and transferred most strongly toward the right. No other findings. This led to a diagnosis of post-influenzal endocarditis, and the child was kept in bed for three and a half months. During this time there was no appreciable improvement, the temperature curve and the heart murmur remaining about the same at the end as they were at the beginning of the confinement. About May 1 the little patient developed some indications of chorea, which yielded readily to treatment. She was allowed to get out of bed, was sent into the country and began to improve from that time on. The temperature gradually resumed its normal status and the murmur has been slowly diminishing ever since, till at the present time, something more than a year after its appearance, it is barely perceptible. She is in every other respect apparently strong and well.

CASE 3.—Baby L., aged 8 months, taken ill during the month of January, 1900. Several other children in the family had been ill with undoubted influenza for several weeks. The little fellow became sick gradually. For several days a slight catarrhal condition of the mouth, eyes and nose had been present. Very soon he refused to eat and developed continuous fever, which was characterized by great severity. For days the temperature remained over 104, occasionally reaching 105.5 and even 106. His pulse was rapid, extremities were cold and blue, respirations were rapid and the patient showed some cyanosis. The most careful physical examination of the chest revealed only a few râles—indeed, the changes in the chest were insignificant as compared with the severe temperature range. The examination of the heart was negative. The abdomen at times was tympanitic. Food was taken in small quantities and only partly digested. The stools were thin, though diarrhea was not a marked symptom of the disorder. The ear was repeatedly examined by a competent otologist with negative findings. At another time the accessory sinuses, including the antrum of Highmore, were most carefully examined and no positive signs of disease found in these regions. After ten days of such alarming symptoms, the patient brightened, the temperature fell and he was undoubtedly on the mend. After several days of apparent improvement the patient again relapsed into the condition previously described. Two such relapses occurred. On each occasion alarming symptoms returned and it appeared that the resistance and the strength of so young an infant was hardly sufficient to withstand so severe an infection. After a course of several weeks, the patient recovered and very soon regained his strength.

The whole course of this infection was remarkable for the almost entire absence of symptoms save the hyperpyrexia and the great prostration. The catarrhal symptoms of the mouth, nose and pharynx were insignificant in comparison with the febrile condition of the child.

CASE 4.—J. R., 8 months old, taken ill about Christmas, 1899, with an otitis. During January had an attack of influenza, with typical catarrhal symptoms, followed by a pneumonitis, during which there developed symptoms of meningitis, such as retraction of head, strabismus and twitching. At this time there was nothing locally to indicate a connection between the meningitis and the ear trouble, which appeared rather better than worse. During the pneumonia the temperature ranged from 102 to 105. A typical crisis occurred, and the temperature resumed normal, or nearly so. After a few weeks the contraction of the neck abated and there followed a paresis so that the child was unable to hold up its head. This condition lasted nearly six months. There was a similar condition in all of the voluntary muscles. Reflexes were diminished. The child was three and a half years old before being able to walk.

At present, 5 years old, though he seems bright and interested in his surroundings, taking part in the games of his playmates, he is unable to talk more than two or three words. He makes his wants known cleverly enough by signs.

I have purposely omitted all mention of treatment of influenza in children, for the simple reason that my study and experience has led me to the belief that there is no specific treatment for any of its forms. The treatment is purely rational and symptomatic, and the indications can only be met as they arise. As these are so numerous and varied an attempt to cover the subject would be obviously useless as well as practically without value.

CONCLUSIONS.

I feel justified, both from experience and from perusal of the literature, in drawing the following general conclusions:

1. Children of any age, even early infancy, are susceptible to the influenza infection.

2. Repeated relapses and grave sequelæ are frequent in cases where the initial seizure is mild as well as where it is severe. Therefore, no attack should ever be considered as "mild" nor as recovered from until a sufficient time has elapsed.

3. Clinical diagnosis should always be supported by the evidence of the microscope, whenever possible, as the practical certainty thus obtained may be of great value in explaining future developments.

I desire to acknowledge no small indebtedness to Drs. I. A. Abt, J. C. Cook, M. P. Hatfield and J. W. White for their kindness in furnishing clinical histories and other data toward the writing of this paper.

58 East Forty-third Street.

DISCUSSION.

DR. R. B. GILBERT, Louisville, Ky.—I regret that the essayist has not given us the treatment. I have been looking for some article on the management of the disease and its sequelæ. I hope some one will elaborate this part of the subject. The ravages of the disease in the young are, of course, much more rapid and severe than in the adult, and often influenza is not recognized until bronchopneumonia has developed and a fatal termination has occurred. I recall a case during the height of an epidemic of influenza in our city in which the mother gave birth to a child while still in the febrile stage. The child presented the same symptoms and died in a few days.

DR. CHARLES G. KERLEY, New York—I agree that the treatment is wholly symptomatic and I do not understand how there can be a distinct method of treatment because in different seasons and epidemics it attacks by preference different parts of the body.

Two years ago there was an intestinal type in New York City, characterized by a diarrhea bordering on the dysenteric type and associated with intense prostration. This year the complication which seemed to be particularly frequent has been involvement of the ear. I have had ten cases this year in private practice in which it was necessary to perform paracentesis, and this does not represent all of the cases in which there was ear involvement. It is evident that the treatment must vary greatly with the prevailing type. One symptom which is usually prominent is prostration. I have seen two children die from the grip simply from the intensity of the intoxication, for the autopsy failed to show any lesion to account for the death. Another prominent symptom is fever, a point which has been well brought out in the paper. I have seen cases in which the high temperature could not be accounted for even by the most careful clinical examination by anything else than the grip. I am inclined to think that some of the cases reported as typhoid fever in children were really instances of grip infection. Many of these cases of grip run along for two or three weeks with hardly any symptoms but fever and intestinal disturbance. All that we can do is to carefully feed these children, control any tendency to hyperpyrexia and employ general supporting measures.

DR. P. J. BARCUS, Crawfordsville, Ind.—It has been pointed out in recent years that when there is an epidemic of scarlet fever at the same time as an epidemic of the grip, because of some possible antagonism between the two diseases, the type of epidemic of scarlet fever is somewhat milder than usual. I have observed such conditions present during the last six months in our vicinity, but I am unable to state whether this explanation is the correct one. It would be interesting to know the real facts. The recent epidemic of grip with us has been milder than usual. I do not think it is possible to formulate any general plan of treatment; it must be symptomatic because of the great variations in the type of the disease. Coal-tar remedies and indeed anything which tends to create depression should be avoided.

DR. H. M. MCCLANAHAN, Omaha—We have seen a great deal of the grip in our city during the past winter. Two symptoms, hyperpyrexia and extreme prostration, have impressed me as very important, and I frequently make the diagnosis on these symptoms. I have not had the opportunity of making the bacteriologic tests, and have, therefore, been compelled to depend on clinical examinations. I have noted that in these cases hydrotherapy has failed to control the fever as in other conditions producing high temperature. Another fact which has impressed me is the frequency of middle-ear trouble and mastoid abscess following the grip. The record of my cases shows that there are more cases of middle-ear disease from grip than from scarlet fever, and the same is true of mastoid abscess. I have adopted a treatment in a number of cases which is not at all new. It is simply the use of quinin bisulphate by suppository in doses of from six to twelve grains daily. It does not cause depression as do the coal-tar products. A few months ago I saw a case in consultation in which the attending physician was pushing phenacetin, although the child's finger nails were already blue. I remonstrated with him, insisting that such a line of treatment was very dangerous. I have seen recently a form of grip showing well-marked nervous symptoms.

DR. THEODORE J. CATLIN, Delano, Minn.—I recall a case, seen last winter, occurring in a boy who suffered a relapse. The fever kept up a long time, and the diarrheal symptoms were marked. The family called in another physician in my absence, and he made a diagnosis of typhoid fever, stating that he made this diagnosis not only on the symptoms mentioned, but on the presence at that time of a distinct eruption. I have met with other cases having skin eruptions similar to scarlatina and some of a marbled appearance. I would be pleased to hear if others have met similar skin symptoms in influenza.

DR. C. F. WAHRER, Fort Madison, Iowa—I should like to ask regarding a classification of the different forms of the grip, and also where is the anatomic seat of this disease. Some years ago, when it first appeared, it was thought that its anatomic seat was in the cerebrospinal system. We then met with the nervous and the catarrhal forms. The treatment is not satisfactory, but is symptomatic and purely empirical. If we knew the anatomic seat of this disease we might be able to suggest a more definite line of treatment.

DR. JOHN C. COOK, Chicago—In a hospital where I do the pediatric work I saw two babies die suddenly within forty-eight hours after birth, their mothers being ill with the grip. I have seen four cases of cerebral troubles this winter, all in consultation, in which the onset was as clearly that of grip as possible. In three of the cases at least one parent had the grip. A week from the time that one of the children had been seen by the attending physician I saw the case. The child was quiet and the only indication of meningeal trouble at the time was that one leg was a little stiff. Two days later the child had Cheyne-Stokes respiration, was rigid and presented the circulatory disturbances of the skin pointing to meningeal complication. Death occurred four days later. In another case, that of a baby nursing from a mother who was thought to have had the grip, the child had appeared stupid for four days before I saw it. Examination showed the pupils unequally dilated, and not responsive to light, the child totally blind. I was assured that the child had not been blind before this illness. It is still blind.

With regard to eruptions, influenza appeared in my neighborhood early in the autumn with an eruption, and the first two or three cases I saw presented an eruption closely resembling that of scarlet fever. As a rule, the throat symptoms were absent, as were also the rapid pulse and high temperature. In addition, all of the symptoms were those of grip. In the five or six cases which I allowed to mingle with the others in the family there was no spreading of the eruption to the other members, showing that the disease was not scarlet fever.

DR. J. H. HANNA, Covington, Tenn.—I saw a case presenting an eruption which I thought to be that of scarlet fever. A few months later measles appeared in the family, and the child developed the same set of symptoms minus the eruption. There was every symptom of measles at the time except the eruption, and although I looked confidently for the measles eruption it did not come. After this had subsided another

member of the family had measles. Three weeks ago the same symptoms developed and continued for several days, with all the symptoms of measles save the eruption. After the fourth day the measles eruption appeared and was well marked and typical.

DR. W. C. WILLIAMS, Chicago—I labored under a misapprehension when I prepared my paper, and consequently wrote so long a paper that it was necessary to omit many portions in the reading. This accounts for certain omissions to which reference has been made. There can be no question that the infection gains entrance through the mucous membranes just as in diphtheria. Some of the German investigators claim to have discovered the germ in the blood itself, and on the valves of the heart where there had been an endocarditis, but the evidence presented is not conclusive to my mind. I had an interesting series of four cases of eruption to report, in three of which the eruption closely resembled the rash of scarlatina. However, other children did not contract the disease. Along with this rash there were not the usual symptoms of scarlatina. All of these cases happened to be followed by an acute general adenitis, indicating that it was a sequence to whatever infection attacked the skin. With regard to treatment, I can only repeat what I said before, i. e., a bronchitis or an enteritis or other manifestation should be treated just as if there were no grip element. I would suggest the use of antiseptic douches to the mucous membranes, although admitting that the trial of this measure has not given encouraging results.

THE TREATMENT OF SCARLET FEVER, ITS COMPLICATIONS AND SEQUELÆ.*

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OMAHA.

It is difficult to discuss intelligibly the treatment of a disease having such wide variations in its clinical manifestations. In speaking of the cases, I shall use the designations: malignant, mild, severe and septic. Malignant cases are those overwhelmed by the poison and terminating fatally in one or two days. I shall say nothing of the treatment of this class. Mild cases are those presenting the characteristic symptoms without complications, the fever subsiding in from five to seven days. Severe cases are those having high temperature, profuse rash, often nervous symptoms, erythematous sore throat, but without membranous exudate. Septic cases are those presenting the symptoms of scarlet fever and, in addition, membranous exudate on the tonsils and other portions of the throat. These cases may or may not be severe at the inception. This is the class of cases in which we have the streptococci infection. These clinical divisions are simply made to indicate the kind of treatment more clearly. The subjects of quarantine, the isolation of the patient, the preparation of the room and the care necessary on the part of the attendants, while important, will not be considered in this paper. Certain general principles of treatment apply equally to all cases, and to these I shall first call your attention.

DIET.

To my mind the diet is exceedingly important and not rightly appreciated. For some years I have adopted the rule of keeping all patients on a liquid diet for not less than four weeks, the object being the prevention of renal complications. According to my observations, this sequela usually follows the mild cases. During the last year I have seen five cases of nephritis following the mild forms of scarlet fever. These cases were not under my care during the acute attack. On the other hand, I have not observed this in any case where the principles of treatment indicated were faithfully carried out. By a liquid diet I mean milk, properly modified to suit the age of the patient. Many cases can be continued on this simple diet. In others we may vary it by the use of thin broths and fruit juices. In young children it is possible to modify the milk to suit almost every case. I have seen but two exceptions; for these whey was substituted with satisfactory results. In all cases the patients should have an abundance of water. In order to encourage the taking of food I recommend the use of carbonated waters, weak lemonade, orangeade, etc. I wish to emphasize the point that this diet is to be continued the full four weeks and not the first or second week, as it usually recommended. The continuance of the liquid diet during the period of convalescence is, to my judgment, the key to the situation.

REST IN BED.

The second general principle of treatment is to require that the patient be kept in bed during the entire course of the disease. I am aware that this is exceedingly difficult in mild cases, but, in my judgment, these are just the cases requiring this extreme care. The patient out of bed by the end of the first week and having the freedom of the house is more likely to be exposed to changes of temperature, to draughts of air, etc.; the influence of this exposure on the cutaneous capillary circulation adds to the work required of the kidney, and increases the danger from this source. In the severe cases it is not difficult to keep the child in bed, and I have a conviction that this is one reason why fewer cases of nephritis follow this severe form of scarlet fever.

LOCAL AND OTHER MEASURES.

In the mild cases, diet and rest in bed constitute the most important part of treatment. A spray or gargle of some mild antiseptic should always be used. Dobell's solution, properly diluted, or Seiler's tablets, dissolved in water, usually meet the indication.

I have very little confidence in any local treatment preventing otitis media. In my observation this complication occurs as frequently in mild as in severe cases. The bowels should be moved freely at the beginning of the attack and as soon as vomiting has ceased some mild aperient should be given. The bowels should move regularly during the entire course of the disease. The initial vomiting seldom requires special treatment. In cases where this is an early symptom, all food should be withdrawn for twelve to twenty-four hours. A simple fever mixture of liq. ammon. acet., properly diluted, may be given for the first few days.

ANTIPYRESIS.

Severe cases require more active treatment. When the fever is 104 it should be controlled. I have no doubt that the nervous manifestations are due to high temperature, as well as to the infection. Among antipyretic remedies, hydrotherapy ranks first. It is not only generally most efficient but, more important, it is the safest. However, in private practice the prejudice of the laity frequently prevents its proper application. Sponging with cool water is sometimes sufficient. More efficient, however, is the application of a towel dipped out of warm water about the body of the child, then, over this, is applied several thicknesses of a towel, wet with cold water. Should these means prove inefficient, I next em-

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

ploy the cooled bath. An ordinary wash boiler, half full of warm water, is placed beside the bed. Over this a sheet is thrown. The child is immersed, the sheet preventing any undue shock and lessening the fear of the child. Gentle friction of the body is now employed, then an attendant adds a quart of cold water and removes a quart of the warm water. This process is continued until the temperature of the water is reduced from 100 to 70, in the course of a few moments. The child may remain in this bath from eight to fifteen minutes. The body is then wiped dry and the child placed in bed. Among antipyretics, I prefer sodium salicylate; two or three grains may be given every hour. This will usually moisten the skin and lower the temperature.

SEDATION.

In some cases extreme restlessness, especially during the first two or three days, require attention. I think it wiser to relieve this symptom than to permit the child to waste its energy by tossing about. To meet this indication I prefer chloral hydrate; two grains every two hours for four or five doses will usually insure quiet sleep. If the heart's action is rapid or weak this remedy may be guarded by the addition of digitalis, one to three drops of the fluid extract being given with each dose of the chloral. If, in addition to the restlessness, there are nervous symptoms, as rolling of the head, oscillation of the eyeball, indicating a disturbance of the high nerve centers, applications of the cold compress to the head are indicated. If the ice cap is not accessible, I use the ice poultice. This is made by spreading dry flaxseed meal over a piece of cloth large enough to cover the head, then distributing over this cracked ice and covering all with a piece of gauze.

TREATMENT OF THE THROAT.

In the septic cases there is a membranous inflammation of the throat and nasopharynx, with increased action of the muciparous glands. These mucous membranes present a large absorbent surface richly supplied with lymphatics, and in these cases we have enlargements of the surface of the gland, continued fever and a general infection. In these cases treatment of the throat and the nasopharynx is extremely important. In my experience there is no treatment so efficacious as irrigation of these parts with a warm salt solution. This is to be accomplished by means of the fountain syringe. It is usually better to wrap the child in a sheet so that it will be completely under the control of the attendant. I personally supervise this treatment, at least for the first time. The mouth and throat are first to be irrigated; when irrigating through the nose the mouth must be kept open. It is my opinion that fluid is not driven in the eustachian tube unless the patient attempts to swallow during the treatment. If the jaws are kept separate deglutition can not take place. The amount of purulent material that is washed away in some of these cases in a single treatment is remarkable. These treatments are to be repeated according to the exigencies of the case; two or three in twenty-four hours, for two or three days, are usually sufficient. I have seen the temperature drop two or three degrees after this treatment. In cases where the discharge from the throat and nose is fetid, the use of permanganate of potassium, five grains to the pint, is of benefit.

In the septic cases, stimulants are always indicated and should be given frequently and at regular intervals. The condition of the heart should be our guide in the use of strychnin or other cardiac stimulants.

CARE OF THE SKIN.

The skin should be carefully treated in all cases. The use of oily applications is of benefit in hastening desquamation and in preventing the infection of the room. In some cases itching is a symptom so annoying as to require attention. For the relief of this symptom my patients have received the greatest benefit from a 1 per cent. solution of carbolic acid. If this fails then the lead water solution liq. plumbi acet., 1 gram to the pint, may be employed. When the fever has subsided the patients should receive a daily bath with soap and water in order to remove the dead epithelium. This treatment is to be continued until desquamation is complete.

GLANDULAR INVOLVEMENT.

Inflammation of the cervical glands occurs in all septic cases. There is little to be gained by treatment except to add to the comfort of the patient. I am in the habit of using the belladonna salve and sometimes over this the ice poultice. Suppuration of these glands occasionally takes place and adds greatly to the gravity of the case. Treatment is surgical. Cellulitis is a serious but rare complication. I have met with but two cases. It is usual to make several incisions in order to promote drainage.

JOINT AND HEART COMPLICATIONS.

Scarlatinal arthritis is usually manifested in older children and young adults. In my experience the wrist and elbow joints have usually been involved. I have seen two cases of suppurating arthritis, one of them terminating fatally as a result of the general infection. The affected joints are usually very painful. The treatment I have found most satisfactory is the application to the joint of a salve composed as follows, sodium salicylate 1 dram, lanolin 4 drams, simple ointment 4 drams. This is thoroughly applied to the joint; which is covered by a layer of cotton batting, held in place by a roller bandage.

The heart should be carefully watched in all cases of scarlet fever. The possibility of inflammatory lesions, both endocardial and pericardial, should be recognized. I have recently lost a case from heart failure at the end of the second week. A rapid pulse, after the subsidence of the fever, or a weak second sound, should place us on our guard.

AURAL PROPHYLAXIS.

The treatment of otitis media is more important than many seem to think. Involvement of the middle ear is due to extension of inflammation along the eustachian tube. It is usually purulent, and when so the pus finds an exit through the external meatus, because of rupture of the membrana tympanum. The symptoms of the middle ear trouble are often vague. If old enough the child may complain of pain or it will be noticed to pull at the ear. Sometimes, however, the first evidence of ear trouble will be the appearance of pus in the external canal. The operation of paracentesis, while theoretically correct, is seldom employed in private practice. A careful examination of the ear should be made in all cases of scarlet fever. When the membrane has been punctured or when it has ruptured, prompt treatment should be instituted. I have for a number of years adopted the following plan of treatment. The attendant is provided with two medicine droppers, a warm boracic acid solution is prepared, the child is placed on its side with the affected ear uppermost. The dropper is filled with the solution which is gently instilled into the ear. The attendant takes the second dropper and, by compressing the bulb, withdraws the fluid from the

ear. This is repeated frequently and until the canal is free from pus. Then the ear is filled with a 50 per cent. solution of peroxid of hydrogen to which a little bicarbonate of soda has been added. This is again washed out by the boracic acid solution, and the canal gently dried with absorbent cotton. This treatment is repeated from two to four hours and continued from day to day until the discharge ceases. Involvement of the mastoid cells has not been frequent in my cases of scarlet fever. When it does occur, prompt incision with drainage is indicated.

Scarlatinal nephritis is the most important sequela of scarlet fever. In all cases frequent examination of the urine should be made. We can usually have warning of impending danger. The earliest symptoms of the nephritis are swelling beneath the eyes or on the dorsum of the foot, with a lessened quantity of urine. The treatment of this sequela in the early stage and its prompt recognition are important. The important points of treatment are rest in bed, a liquid diet and the avoidance of stimulating diuretics and the increasing of the function of the skin and bowels.

In cases seen early, these principles of treatment are usually sufficient.

DISCUSSION.

DR. R. B. GILBERT, Louisville, Ky.—This is certainly a very important subject, for the successful management of scarlet fever is a great desideratum. It is well known that many of these cases are not brought to a successful issue. I agree with most of the statements made in the paper. One treatment not referred to was popularized some time ago and advocated by the late Dr. J. Lewis Smith, the idea being that scarlet fever tended directly toward death from the onset, and that, therefore, from the first the treatment should be supporting. He often began the treatment by giving the ammonio-citrate of iron. It has been my own custom to use this remedy in these cases regardless of what other conditions might arise. I believe many cases are benefited by it, and that the method is superior to the plan of waiting until the patient has already become anemic. Mild diuretics are also indicated, though, of course, we should employ no highly stimulating diuretic. Mild carbonated waters should be given in abundance, and by such free elimination we should seek to minimize the danger of nephritis. I am not thoroughly in accord with the use of so many baths. It is difficult to carry out in private practice, and in a few instances in which I have insisted on such baths and the patients have died I have been accused of contributing to their death. A great deal can be done toward the successful management of scarlet fever by inunctions, and I know of nothing better than lard, which is cheap and always at hand. It may possibly be made a little more efficacious by the addition of carbolic acid, although it is chiefly of use in controlling the itching. I have often seen cases of scarlet fever at the beginning of the desquamation in which the temperature of the patient was reduced two degrees by a thorough inunction. Only two years ago I was asked to take charge of a case that had been under the care of an intelligent homeopathic practitioner of my city. His medicines had exerted no controlling effect on the fever, and as exfoliation had already begun and the chief symptoms were the high temperature and the intense itching, I recommended a general inunction with lard. After waiting thirty-five minutes we found that the boy was so comfortable that he was dozing, though sufficiently awake to say to me: "Doctor, please do that again, it makes me feel so good." I do not think there is any need for any heroic treatment of the temperature unless the maximum daily temperature exceeds 102 F. When it does go beyond this point I make use of sodium salicylate made from the natural source.

DR. G. A. HERMANN, Hamilton, O.—I wish to refer to a case in which a boy was doing so well that I discharged him as cured. I was greatly surprised in a few days when the father told me the child was dead. On inquiry I found that the boy had passed very little urine for the last twenty-four hours. Death had evidently resulted from nephritis. In another case in which I neglected the kidneys I had much trouble with the child for two years, trying to restore the general health. Since these experiences I have been most careful to attend to the functional activity of the kidneys.

DR. J. H. HANNA, Covington, Tenn.—I recall the case of a child of about 6 years of age, who fell and bent her arm. I put it in a splint and kept it there for four weeks, after which the arm was straight and apparently in excellent condition. About four weeks later the child fell again and bent the same arm in an opposite direction. The arm could then be straightened just as one would a green stick. It was kept in a splint for three or four weeks. Once more the child fell with the splint, and succeeded this time in bending the arm in the opposite direction again. It seemed to me that in that case there was a deficiency of lime which caused this bending of the bone. There had been some little trouble with the kidneys. After this the arm did well. With regard to inunctions, I think vaselin is one of the best remedies for this purpose, and I am of the opinion that it prevents the spread of the disease by preventing the dissemination of the desquamated epithelium. If carbolic acid is simply stirred into the vaselin to make a 10 per cent. ointment, it will be found that the mixture is very unevenly made, and this may cause serious trouble.

DR. CHARLES G. KERLEY, New York—I support the reader of the paper in everything he has said. I would like to keep my scarlet fever patients in bed at least four weeks. I am also in favor of cold applications when the fever needs attention. Mothers must be taught that there is no danger in such applications in any of the exanthema. The idea that the disease will "strike in" is an old and exploded fallacy. I do not approve of a fountain syringe for nasal irrigation, preferring to use instillations by means of a teaspoon, or some similar method. I am not particularly fond of carbolic acid in oily mixtures for the skin dressings, being rather afraid of absorption. I much prefer some simple inunction, such as vaselin, and think it answers every purpose.

According to my observation, very few cases of scarlet fever die from scarlatina poisoning, but usually through some of the complications. The parts which must be watched particularly are the ears, the heart, kidneys and the lungs. I have seen a few cases of endocarditis develop in connection with scarlet fever. It is very necessary to examine the urine at least every other day.

I am glad attention was called to the fact that there may be a suppurative otitis entirely unassociated with pain. I have been called in consultation not a few times because there was a high temperature which could not be accounted for. On looking into the ear the cause of the fever was found in an otitis which had not made itself known by the presence of pain.

DR. B. R. SHURLY, Detroit—There is one phase of the treatment of scarlet fever to which I desire to refer, i. e., the administration of antistreptococcus serum. I have had but two malignant cases during the past year, which have given me an opportunity to use this serum, and, unfortunately, in both instances the serum was not administered until late in the disease. There was a fatal result in both cases. I should like to hear further reports of the results from this treatment. It seems to me that the key to the whole situation is to be found in the throat; the complications of otitis media, endocarditis and kidney trouble are simply due to absorption from the pathologic state of the nasopharynx. This emphasizes the importance of thorough irrigation of the nose and throat in the various stages of this disease.

DR. E. T. SHELLY, Atchison, Kas.—I wish to inquire with regard to the use of diphtheritic antitoxin in scarlet fever. I think Dr. Holt has recommended that children in institutions suffering from any of the exanthemata and having suspicious throats should be given diphtheria antitoxin.

DR. JOHN M. DODSON, Chicago—With regard to the use of antistreptococcus serum, I should like to say that Dr. Class of Chicago, whom I know to be an earnest and enthusiastic worker, believed a few years ago that there had been discov-

ered in a certain diplococcus the specific cause of scarlet fever. He was at that time connected with the health department of Chicago. At the meeting last year rather positive statements were made with reference to this organism as the causal factor, and it was pronounced to be unquestionably the cause of scarlet fever. I feel very sure that that statement was made on insufficient grounds. In the laboratories of Rush Medical College a very thorough study of the organisms found in the throat and blood of scarlet fever patients has been made during the past year, and it has been determined that the organism I have already referred to is not a specific organism, and can not be identified as a definite micro-organism to accord with the statements made by Dr. Class. At one time it was thought that garden earth was a very necessary culture medium, but it was soon discovered that the organism would grow on a great many media, and that the organism itself was not uniform in its morphologic or cultural characteristics. I may add that streptococci are not always present in scarlet fever, although they are present in the majority of severe cases, and many of the phenomena of scarlet fever are traceable to streptococcus secondary infection. I think it is likely that some other organism not yet discovered, possibly a protozoön, is the cause of scarlet fever. Herein lies the difficulty of using the antistreptococcus serum. Another difficulty is that there is a large number of varieties of streptococci, and each variety requires a serum produced by that particular variety to successfully antagonize it. This seems to be an insuperable obstacle in practice. When streptococcus infection arises we are compelled to use whatever antistreptococcus serum is available, and it is more than probable that it will be from an entirely different variety of streptococcus, and be, consequently, wholly ineffective. The practice in Chicago seems to be to determine, if possible, the nature of the membranous angina before resorting to the use of diphtheria antitoxin. In the majority of cases the sore throat of scarlet fever is not due to the diphtheria bacillus, although this organism is sometimes present.

DR. A. G. PERSON, Snyder, Texas—I have had one case recently which seems to me to clearly sustain the recommendation of the essayist in favor of a milk or liquid diet. The first case in the epidemic occurred in a girl of 15. I recommended that she be kept in bed on a milk diet. She recovered rapidly, and as her appetite improved she insisted on a mixed diet. Her father wrote me, while in New Orleans attending the Polyclinic, that she had a relapse and a very severe kidney complication. Six other children have all passed safely through the disease, as they could be more easily controlled.

DR. ORVILLE A. KENNEDY, Louisville, Ky.—I desire to emphasize the importance of watching all through the course of the disease for complications and of guarding against the spread of the disease. To prevent ear and throat complications keep the nasopharynx thoroughly cleansed. To prevent kidney complications, a liquid diet is most important. To prevent the spread of the disease inunctions are very useful. For this purpose I use, and find it very effective, not only to prevent the spread of the scales, but to allay the itching, a solution of thymol and eucalyptol in olive oil. The patient should be thoroughly anointed with this two or three times a day.

DR. H. M. MCCLANAHAN, Omaha—In the case of scarlatinal nephritis, occurring about the third or fourth week, I question the wisdom of giving any diuretic at that time, as I consider it better to give the kidneys physiologic rest by stimulating the activity of the skin and bowels. As to the use of cool baths, it does seem to me that when we are convinced of the efficacy and virtue of a treatment it is our duty to educate the public as to its importance. A number of years ago I encountered a prejudice against baths and declined to treat certain cases because the parents would not allow me to exercise my own sincere judgment. With regard to inunctions in private practice, I would say that I make use of a mixture made by taking four tablespoonfuls of lard, placing this quantity in a cup and heating it in hot water for half an hour, and then adding a cake of white wax and a teaspoonful of the oil of eucalyptus. This makes an elegant and thoroughly sterile preparation. In my practice it is extremely rare to have a pulmonary complication in case of scarlet fever, and I presume it is more common along the coast. I am glad the fact has been emphasized that an otitis not infrequently develops in scarlet fever without any pain. I think it is the duty of the physician in this disease to examine the ears with a mirror at intervals of two or three days. I do not feel that I can speak with authority on the use of antistreptococcus serum. I have used it on the theory that the complications of scarlet fever are generally due to some variety of streptococcus, and this view has been borne out by the excellent article recently published by Hektoen. I have always understood that the membranous sore throat of scarlet fever is not, as a rule, due to the Kelbs-Loeffler bacillus, and hence it does not seem to me wise to give the antidiphtheritic serum in those cases. Again, I have never yet seen a case of laryngeal stenosis complicating the membranous sore throat of scarlet fever.

TETANUS PROPHYLAXIS AND SUSPECTED WOUNDS.

JOSEPH McFARLAND, M.D.
PHILADELPHIA.

In 1899, in association with E. M. Ranck, I published a paper in the *Journal of Comparative Medicine and Veterinary Archives* entitled "Tetanus Toxin and Antitoxin." In addition to general facts regarding tetanus, the tetanus bacillus and the toxin and antitoxin, there were recorded some practical experiences with the antitoxin as a prophylactic, which, probably because of the nature of the rest of the paper, escaped the attention they deserved.

The observations to which I again call attention were made in one of the large antitoxin factories of this country on a number of horses somewhat exceeding 800, and continuing over a period of nearly four years. These 800 horses were used for immunization experiments in manufacturing different therapeutic serums, and were constantly being injected and bled at frequent intervals, and occasionally suffered from local lesions consequent upon the irritative action of the injected toxins.

At the time the laboratory and stables were in an old building, which, though it was kept very clean and occasionally disinfected, seemed to be badly infected with tetanus. Our first attempts at stamping out the disease were by thoroughly cleansing and disinfecting the stables, and washing the horses with disinfecting solutions, as well as by exercising every precaution to prevent the dissemination of dust.

In spite of these precautions, the death rate from tetanus sometimes rose so high as to make us seriously consider abandoning the quarters, or temporarily suspending business. The highest death rate was in 1895, when it reached 10 per cent., and it was not until we had had this experience that I instituted the regular and systematic immunization with antitetanic serum, as a means of preventing the disease, and every horse was immunized every three months. The periodical treatment consisted of an injection of from 10 to 25 c.c. of a low grade of antitetanic serum, the injection being repeated in about ten days. The effect was immediate and striking, and taking the result by years, we find the following: 1897, no precautions taken to prevent tetanus, death rate 8 per cent.; 1898, no precautions taken until late in the year, and then antitetanic serum used unsystematically and in insufficient doses, death rate 10 per cent.; 1899, systematic immunization of every horse, carried out as described, death rate from tetanus, 1 per cent.; 1900, systematic immunization of every horse continued, death rate less than 1 per cent.

These observations show the thoroughly reliable result to be obtained by the proper and systematic employment

of antitetanic serum as a prophylactic. Such employment does not apply to antitoxin factories only, but has a far-reaching application in all departments of human and veterinary medicine. We averaged 200 horses a year in the stables mentioned. In two years the deaths from tetanus numbered 36, in the next two years about 4. We, therefore, saved the lives of 32 horses by this prophylactic treatment.

Every day there apply for treatment in the dispensaries of our large cities patients suffering from lacerated and punctured wounds of the hands and feet that are suspicious in character, and concerning which one is in doubt whether tetanus may not develop. In spite of the ordinary antiseptic treatment, in many of these cases tetanus does develop, and many of the patients die.

Those familiar with the treatment of tetanus by any of the methods yet suggested (including that with antitoxin) are quite familiar with the fact that after tetanus once develops, the probability of curing the patient is very slight.

The practical conclusion that must be drawn from the observations on the antitoxin horses seems to me inevitable; that in all suspicious wounds, that is, all wounds at all likely to be followed by tetanus, the antitoxin should be administered as a prophylactic. This I have urged repeatedly in other writings, and have taught my pupils from year to year, but there are objections that have some slight weight. The antitetanic serum is expensive, does not keep indefinitely, and must be administered by subcutaneous injection, which alarms and pains the patient. In many cases, therefore, dispensaries and practicing physicians are unable to provide and employ the serum, a matter of economy and penury which undoubtedly costs life.

I was very much interested during December, 1902, by a description given me by Dr. Damaso Rivas, who, returning from the laboratory of Professor Calmette at Lille, related to me some experiments that he had seen conducted there, and in which he had participated, which showed that antitetanic serum, while not absorbed from the skin or mucous membranes, is readily absorbed by denuded surfaces, and when the dry serum is dusted on wounds it is readily absorbed, and confers immunity on animals. I at once recognized the practical importance of this observation, and conducted a series of experiments to show how useful dry antitetanic serum as a dusting powder might be. It did not take many experiments to prove the correctness of Professor Calmette's observation.

Experiment 1.—Sixteen adult guinea-pigs were employed. The abdomen of each was shaved, and with a sharp scalpel the skin was cross-hatched, as in performing the operation of vaccination, and an area of about 1 cm. in diameter was abraded. With a platinum loop a drop of a pure culture of the tetanus bacillus was thoroughly rubbed into the abraded surface, and in one-half of the animals the seat of operation was dressed with cotton saturated with collodium; in the other half the abraded surface was thickly sprinkled with pulverized antitetanic serum, and then similarly dressed with collodium. The results were striking. Every animal of the first series died with typical tetanic convulsions, while every one of the second series lived and showed no symptoms.

In order to compare the effects of mixed infection, I performed the following experiment:

Experiment 2.—Eight adult guinea-pigs were prepared by shaving the abdomen and cross-hatching the surface, as described. Each was now infected with a suspension of garden earth, which was rubbed into the injured surface. In four cases the surface was dressed with collodium; in the remaining four, thickly sprinkled with the antitetanic powder and then dressed with cotton and the collodium. These animals all recovered, there evidently being no tetanus bacilli in the garden earth employed.

It then occurred to me that if an active but harmless antiseptic could be combined with the antitetanic powder the powder might be doubly useful; first, in preventing tetanus; second, in inhibiting the growth of other micro-organisms. As best adapted for this purpose, I selected chloretone, which is both analgesic and antiseptic, and performed the following experiment:

Experiment 3.—Eight guinea-pigs prepared as already described were infected with pure cultures of the tetanus bacillus. In four the wound was simply dressed with cotton and collodium; in the remaining four, thickly sprinkled with the dusting powder, consisting of antitetanic powder and chloretone, then covered with cotton and collodium. The unprotected animals died in two days with typical tetanic convulsions. Of the remaining animals, one died on the sixth day of tetanus.

This showed that the combination of equal parts of chloretone and antitetanic powder had too greatly diluted the antitetanic powder, and made it less useful than when the purer dried serum was used. It was suggested that chloretone, which is cheaper, might suffice, and that if wounds were dusted with it, an antitetanic serum would be unnecessary. So another series of experiments was undertaken.

Experiment 4.—Eight guinea-pigs were employed, all prepared and infected with the tetanus cultures, as usual, and in one-half the wound was thickly sprinkled with chloretone, then dressed with cotton and collodium. All of these animals died of tetanus.

I was loath to publish the results of these experiments until I had learned what Professor Calmette intended to do with the observations he had already made, and accordingly corresponded with him, telling him of my experiments, and of the important bearing I thought they had upon the prophylactic treatment of possibly infected wounds. He answered that within a day or two from the time he wrote me, he was expecting shortly to make a communication on the subject, and a later mail brought me a pamphlet containing his communication made to the Academy of Science at Paris, May 11, 1903, in which his own and Dr. Rivas' experiments are given, and in which the results of the experiments performed in his laboratory and in my laboratory are shown to be uniform.

The advantages of this method of treatment are many. The dry antitetanic serum preserves its activity indefinitely. It requires no instrumental administration, etc., but can be conveniently sprinkled, from the bottle in which it is dispensed, on the wound after the surface has been thoroughly cleansed and prepared to receive it. It is devoid of irritating properties, slowly dissolves and is absorbed, and when thus applied has the double advantage of neutralizing the toxin of the tetanus bacillus as it is elaborated in the wound, and of being absorbed into the patient's blood, where it remains to neutralize any toxin subsequently formed and absorbed.

I feel that these experiments of Professor Calmette and myself should have a most important bearing on dispensary practice, and that particularly in those districts of our country where tetanus is known to be frequent, the powder should be systematically employed for dressing of wounds, and in lieu of the observations to which attention is directed in the opening of this communication, I would recommend a very wide application of the antitetanic serum for prophylaxis against tetanus in both human and veterinary practice.

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SPRING WATER AND TYPHOID FEVER.

The firmly rooted popular belief in the superior excellence of ground water, and especially of spring water, is not difficult to understand. The usual clearness and brilliancy of such waters, together with their coolness, render them highly attractive to the eye and pleasing to the taste. In times of typhoid epidemics "pure spring water" is a shibboleth of undoubted commercial value. A strong and wholly natural preference for ground water as a source of town supply has been evinced on many occasions. The citizens of Ithaca, after becoming fully aware of the origin of the late typhoid epidemic, could not express too deeply their abhorrence of surface water. In France for many years *les eaux des sources* have held the highest position in the estimation of most municipal authorities, and in that country spring waters have been widely accepted as the most desirable source of municipal supply.

The last decade, however, has seen a profound change in the position accorded by sanitarians to spring waters. From many quarters evidence has accumulated that the delectable appearance of spring water too often masks a treacherous nature. Gärtner,[1] in a recent monograph on this subject, has brought together a formidable array of outbreaks of typhoid fever attributed with greater or less certainty to spring water. He clearly shows that in many instances the trusted spring water is nothing but unfiltered surface water of dubious antecedents. In chalk and limestone regions especially, where the existence of extensive subterranean channels and crevices renders it exceedingly difficult to determine the sources from which a spring is fed, the danger of surface contamination is ever present. The calamitous typhoid epidemic at Worthing, England, in 1893, will at once occur to the student of epidemiology as a case where the fissures in chalk were responsible for an unusually extensive outbreak of disease. In some regions small brooks or rivers which are known to receive sewage pollution may disappear wholly or in part in openings in their beds, only to emerge at a remote point as gushing and copious "springs" which confiding inhabitants will make use of for drinking purposes with a calm assurance of safety which would indeed be ludicrous if it did not so often lead to appalling consequences. The changeable character of spring water, both as regards turbidity and bacterial content, its dependence upon the amount of rainfall, upon the topography of the country and the underlying geological strata, and above all, the often insuperable difficulty of learning the real origin of the water, are not features that increase its desirability as a source of supply. Gärtner points out that geologists are largely responsible for the growth of the modern views regarding the uncertain character of spring water, and quotes with unqualified approval a statement by the geologist, Heim, that he would drink the filtered water of Lake Zurich with a feeling of greater security than the water from the majority of springs with which he was acquainted. "Springs are changeable; to-day good, tomorrow, perhaps, unsafe."

If a widespread reaction has already set in against the indiscriminate use of ground waters it is amply justified. There have been several noteworthy illustrations of the unsafe character of spring water in the hygienic annals of recent years. The water supply of Paris, which is perhaps the most extensive modern system of municipal spring water supply, was for a time highly vaunted as an example of a naturally pure water, as compared with the "merely purified" water of Berlin and other European capitals. Pure spring water was eloquently contrasted with filtered surface water; innocence was said to be better than repentance. It was not long after its introduction, however, before the Paris supply fell under a cloud. The epidemics of typhoid fever in 1894 and 1899, and the searching investigations to which they gave rise, have shown unmistakably that the spring water from the region of the Vanne is not only not beyond suspicion, but that it is actually responsible for an excessive amount of typhoid fever in Paris. The facts brought to light by these and similar inquiries have caused a decided change in the opinion of French sanitarians regarding the character of spring water, and recent utterances by Brouardel and others indicate that in France spring water has had its day as the ideal for a supply.

In addition to the epidemiologic evidence, recent bacteriologic investigation has also cast doubt on the universally wholesome character of waters of this class. Horton[2] has reported finding the colon bacillus in water from a number of springs and driven wells, and concludes as the result of his investigations that the fact that water is derived from a drilled well can in no wise be taken as a guarantee of its potability.

We can no longer hesitate to admit the fact that many spring and ground waters are nothing but insufficiently filtered surface waters which may, indeed, have traversed long distances underground, but which have met in their course no layer of soil or sand of purifying power. To continue to place implicit trust in waters of this sort is to tempt further "accidents" of a kind with which medical literature already teems.

1. Klinisches Jahrbuch, ix, 1902.

2. Journal of Hygiene, vol. iii, 1903, p. 155.

FAT BABIES AND HEALTH.

In a recent issue an English contemporary[1] calls attention to the mischief which is being done by the present standard that is accepted as regards healthy babies. As this paper well says, at baby shows the prize is practically always given to the fattest baby. There is a tradition current among mothers, as far as the memory of man runneth, that fat babies are just the pink of perfection. The surest index of this is that all manufacturers of artificial infant foods advertise their wondrous virtues by photographs of thoroughly rounded, and at times positively obese dumplings of babies. Mothers are very proud of their young hopefuls if they are a mass of curves and dimples with deep folds at all the joints and cushions of fat that conceal their anatomy so effectively as to make them formless little masses of humanity. They have been encouraged in this idea by the mistake of some of the classic painters who have pictured babies of this kind as if they were models of all that is finest in babyhood.

Fatness is said to be a distinctive quality of superlative beauty in the harems of the East, but there is no need to appeal to the antifat-cure crowded advertising columns of our magazines to prove that this standard is not generally accepted among the occidentals. Fatness is no more truly beautiful in a baby than in an adult. Opposed to the traditions that fat babies are healthy is the generally accepted medical opinion that, on the contrary, very fat infants are especially prone to succumb to certain diseases. Very few physicians dare to give a good prognosis when their child patient is very fat. This is not surprising since the blanket of fat in which all the child's organs are wrapped absorbs all the heat manufactured during the course of a fever, and makes antipyretic measures very difficult of application. Besides, the presence of fat seems of itself to be a distinct hindrance to the exercise of organic function with consequent lowering of vital resistance. Whether fat babies are more liable to infection than others is not definitely decided, but it is well known that they are at least as prone to the minor infections, such as colds, and to the so-called ordinary diseases of childhood, as are much thinner babies.

It seems worth while to call attention to this subject just at this time because it is during the warm weather that fat babies are distinctly at a physical disadvantage. They swelter and chafe, and, as can readily be understood, are much more uncomfortable than are their thin fellows of the same age. They lose sleep easily, and are thus predisposed to nervous complications in any serious illness. Yet all the winter months before the dreaded second summer fond, anxious mothers have been mainly engaged in securing the accumulation of as much fat as possible on baby under the mistaken notion that this means good health.

There is no doubt that some of the responsibility for the persistence of the erroneous idea of the correlation of fat and health in infants must accrue to physicians who have either encouraged or at least have not properly opposed the notion. As the *Lancet* says, "Fat babies to the touch are cold, gelatinous and flabby, with none of the elasticity and tone characteristic of the vigorous, healthy, breast-fed baby. When fed à large proportion of carbohydrates of sugar, infants are apt to have a curiously translucent, almost opalescent appearance of the tissues." This represents the true state of the fat baby which is rather a pathologic specimen than the model of health they are considered to be by the judges at the baby shows. There is no doubt that if this idea could be properly brought before the public many infants would be healthier and more resistant to infection than is the case at the present time, when deliberate "feeding for fat" is almost the rule, though such infants are rather seriously handicapped than helped by the additional weight they have to carry in the race of life.

1. Lancet, June 20, 1903.

A LAW AGAINST "NASTY ADVERTISEMENTS" IN MICHIGAN.

The new Michigan Medical Practice Act, which goes into force in a short time,[1] had added to it just before its final passage an amendment which authorized the Board of Registration in Medicine to revoke the certificate, after due notice and hearing, of any registered practitioner who inserts advertisements in newspapers, pamphlets, circulars or other written or printed paper relative to venereal disease or other matter of an obscene or offensive nature derogatory to good morals. This amendment was unanimously passed by the legislature, and with practically no opposition; not even from the newspapers. The profession in Michigan has become well organized, and was thus able to take up this work with reasonable hope of success. It was this effort of a united profession, backed by one or two newspapers, which made success possible. Due credit should be especially given to one newspaper, the *Detroit Journal*, which for a long time has refused to admit to its pages any quack advertisements, and which fought for and was one of the factors in securing the amendment.

It is to be regretted that this work can not at once be carried further, and that these nasty, as well as demoralizing, advertisements can not be entirely eliminated from our newspapers everywhere. The Michigan law only reaches the advertising quacks in Michigan, and does not affect the same class who reside in other states and yet who may advertise in the Michigan newspapers. If the legislators in other states will enact similar laws and give the licensing boards the right to revoke certificates for such advertising—and such legislation can be had in every state if the profession will go about it in the right way—then we may hope to purge our profession of its greatest curse, and remove from newspapers the filthy and disgraceful advertisements, not only in Michigan, but elsewhere. The law is a most righteous one, no matter from what point of view we may look at

1. See page 45.

it, and Michigan has certainly set an example for other states to follow. This is not of interest to the medical profession alone, but much more in the interest of the public and good morals generally. In fact, it is in the interest of preventive medicine. The result of the wretched stuff sent out by these advertising quacks is not only debasing, but is also the means of making many who read it hypochondriacal, and has a direct tendency to the increase of mental disease. It is the policy of this class of advertisers to demoralize, as well as to frighten, their victims, and then to rob them. The corrupting influence of such advertisements is manifest to everyone, but their mentally weakening and depressing influence is best evidenced before the practicing physician. It is time that our legislators should be called to a sense of their responsibilities in this matter.

We earnestly urge those who are interested in legislation everywhere to consider the advisability and possibility of getting such an amendment to the now existing Medical Practice Acts, as that to which we have above referred, and to make it to apply not only to those who advertise within the state, but also to those who advertise in papers beyond its limits.

FOURTH OF JULY INJURIES.

As long as we celebrate the Fourth of July in the customary manner, we may expect the usual number of injuries on this day. This is one of the cases in which we can do little in the way of preventive medicine, yet while we may not hope to reduce the number of accidents, by proper care we may be able to minimize the ill effects which so frequently follow them.

The injuries common to Fourth of July accidents may be divided into two classes: (1) Those which produce considerable damage to the person, but are attended with little danger to life; (2) those which are comparatively trivial, so far as the damage done is concerned, but which are attended with great danger to life. In the first class may be placed such injuries as the loss of a portion or all of a hand or arm, due, for instance, to the explosion of a giant cracker. In these cases, although the loss of tissue may be great, the end is usually in recovery. They should all be treated as infected wounds from the start, and great conservatism should be exercised in the removal of injured parts.

It is to the second class to which attention is particularly directed. To this class belong the numerous small wounds produced by the toy pistol, the blank cartridge, the fulminate cap, etc. These wounds often appear trivial and unimportant on the surface, but herein lies one of their chief dangers. They appear so trivial that frequently they are neglected. Their principal characteristic is the penetration of the soft parts by a small particle of foreign matter, such as the wad, particles of unburned powder, a portion of a cap, etc. These foreign bodies carry into the depths of the wound the ordinary pyogenic germs or the much more dangerous tetanus bacillus, and unless the wound receives the proper treatment from the start, the most disastrous results may follow.

The tetanus bacillus finds around a foreign body in the depth of a small penetrating wound from which the air is excluded, the best possible conditions for its development and growth. Such being the case, the plan of treatment is well defined. No matter how innocent or trivial these wounds may appear on the surface, they should invariably be laid open freely at the earliest possible moment, either under local or general anesthesia, in order that it may be thoroughly done; all foreign matter sought and removed; the wound cleansed with an antiseptic solution—1-1,000 bichlorid or dilute peroxid, and dressed as an open wound to which the air has free access.

If this line of treatment be instituted early, there will be little danger of tetanus. In case the wound is not seen until some days after its reception, the same open method of treatment should be instituted, but in addition, it is advisable to inject tetanus antitoxin as a prophylactic. By following this simple plan, many of the deaths due to lock-jaw after apparently slight Fourth of July injuries will be prevented.

ACCIDENTAL INFECTION WITH BLASTOMYCOSIS.

The clinical report in THE JOURNAL last week[1] of a remarkably interesting and important case of accidental infection with blastomycosis (more properly oïdiomycosis) by Dr. Newton Evans, calls for a word or two of further comment.

It will be recalled that the infection followed an insignificant wound received at an autopsy of the case of systemic blastomycosis reported by Ormsby and Miller and discussed at that time briefly in the editorial[2] columns of THE JOURNAL. The clinical cause and the gross appearances of the case of accidental inoculation are well described in Dr. Evans' paper. The special feature of the case to which it seems well to direct attention is the fact that this is the first known instance of blastomycetic infection in which the exact source of the disease is established. That source undoubtedly being another case of blastomycosis, we have here the nearest approach as yet at hand to establish definitely upon unassailable basis the pathogenic importance of the blastomycetic organisms concerned, or mold-fungi, and which appear to be identical in the two cases. It has not yet been possible to produce experimentally in animals any process at all similar to blastomycetic dermatitis in man, and consequently more or less doubt has been expressed on various sides, principally by clinicians, as to there really being any disease like blastomycetic dermatitis. This is evident enough from the discussion of Dr. Evans' paper.

In Germany the so-called "American disease" has been ridiculed freely, especially by Kromayer, and this in spite of the fact that the clinical course of the disease

1. Journal A. M. A., June 27, 1903, p. 1772.
2. Journal A. M. A., May 23, 1903, p. 1444.

and the gross appearances of the lesions are quite distinctive and characteristic, while at the same time the histology of the lesions is peculiar and distinctly different from that of cutaneous carcinoma, tuberculosis and syphilis. The history of blastomycetic dermatitis shows that attention was first called to its occurrence in Chicago by pathologists whose interest was arrested primarily by the distinctive histologic peculiarities of the lesions. Now the situation of the organisms in the cutaneous lesions, often away from the surface, and their relations to the well-known miliary abscesses, speak strongly against accidental presence, while the absence of tubercle bacilli, as shown best by negative results from inoculation of guinea-pigs, serves to exclude definitely at least tuberculosis. And then the development of generalized blastomycosis with massive accumulations of blastomycetes in the lungs and elsewhere demonstrates further their pathogenic importance, as well as the eventual seriousness of the disease.

Finally, we have Evans' case of undoubted accidental inoculation to still further clinch the matter. The fact that the disease in this case described by Evans seems to be localized in the skin, while the source of the infection was a general blastomycosis, resembling greatly the so-called protozoic disease of Posadas, Wernicke, Rixford and Gilchrist, would go to strengthen the claim advanced by Ricketts[3] that the "protozoic disease" is a manifestation of the same infectious process as blastomycetic dermatitis.

AN ENDOWMENT FOR MEDICAL EDUCATION.

Some months ago we announced a professional gift to the medical department of the University of Chicago—Rush Medical College—by Mr. Rockefeller. Representations had been made to Rockefeller of the needs of the institution if it is to carry out the ideals in medical education that its friends desired, the necessary amount being put at $7,000,000 to $10,000,000. Mr. Rockefeller then made his offer to give the required amount provided $1,000,000 was raised by Chicago. July 1, 1903, was set as the date at which the money should be raised. On Tuesday the committee having the matter in charge unofficially represented that the million dollars had been raised. Few realize what this means to medical education of the United States. It is of national interest, for it means a long step forward, and one that will affect the medical education of the United States. It is not Chicago only, but the whole country that will profit; it is not the medical department of the University of Chicago alone, but all medical educational institutions that will feel the impetus and be benefited.

SOIL NITRIFICATION AND MOSQUITOES.

The extinction of malaria is one of the great medical questions of the day, and it is only natural that active minds should constantly find new points bearing on this subject. One of the latest suggestions is that given by Dr. Arthur R. Waddell in the *Lancet*, June 6. In experiments on the destruction of mosquitoes and mosquito larvæ he was impressed with the observation that very minute quantities of ammonia were decidedly fatal to these insects. Using strong liquor ammonia as a standard, a solution of 1 in 4,000 proved absolutely fatal for mature larvæ, and a solution so much weaker killed immature larvæ that he made the calculation that 1 in 20,000 or 30,000 would be sufficient to make water uninhabitable for them. His experiments indicated that ammonia is poisonous to mature larvæ in all its combinations. This suggested to him the fact that the nitrification of the soil might be one of the active factors in the prevention of malaria through its unfavorable effects on the growth of mosquitoes, and he thought that he saw evidence of this in the decrease of malaria under more scientific cultivation in certain parts of Great Britain. He attributes this to the enormously increased use of nitrogenous manures and the cultivation of plants whose roots give support to nitrifying bacteria, such as clover, etc. Against this, though he does not mention it, might be stated the fact that virgin soil is particularly favorable to malaria, though its nitrogen content has not been exhausted by cultivation, and that malaria in this country decreases with cultivation, even without a very extensive addition of nitrogen fertilizers. Still, there may be something in the author's suggestion, and at least it is worthy of consideration.

3. Journal of Medical Research, 1902, vi, No. 3.

A HOUSE ENDEMIC OF MALARIA.

An interesting example of the mosquito origin of malaria is furnished by a house endemic reported by Jancsó.[1] It seems to explain how fresh cases may occasionally spring up in winter, aside from the well-recognized relapses. In November and December, with ice and snow on the ground, there occurred in the hospital, both among the patients and the staff of assistants, nine cases of malaria, recognized as such by the clinical behavior and by the detection in the blood of the parasites, in every case those of the estivo-autumnal variety. The explanation of this occurrence, unusual for the time and place, was found in the fact that a few days before the cage containing several specimens of anopheles that had been experimentally infected with this variety of plasmodium was overturned accidentally, the mosquitoes escaping, but not, as was thought at first, being destroyed by the cold. As was later discovered, the insects had sought out wards and rooms that, while not as warm as the incubator temperature they had left, still enabled them to live, and to bite several patients ill of diseases other than malaria, as well as several well individuals, among whom was Dr. Jancsó himself. The culprits were found, and several were examined, showing the sporozoites that had developed from the previous experimental feeding. Dates, clinical features, microscopic findings in the blood and in the mosquitoes are all carefully given, so that the proof seems conclusive that the origin of this house epidemic certainly lay in the bites of the twenty escaped and infected anopheles. This outbreak of malaria in winter, at a time when mosquitoes are supposed to be dead or hibernating, is, therefore, no argument against the mosquito theory, as some would

1. Jancsó: Deutches Archiv für Klinische Medicin, Bd. lxxvi, p. 474.

be inclined to contend at first thought, but a convincing proof as to the rôle of the mosquito in the transmission of the disease. It teaches a lesson, too, as to the great care that should be exercised in experimental work with these insects, particularly when they are infected with the more dangerous estivo-autumnal parasites. One of the nine victims in this endemic was a sufferer from typhoid, and a second succumbed to pneumonia. Secondary or mixed infection with malaria is a serious matter.

Medical News.

ILLINOIS.

Chicago.

Smallpox.—Only two new cases of smallpox were received in the Isolation Hospital during the week ended June 20. One child, 28 days old, died in the hospital, fifteen were discharged recovered and eighteen remained under treatment at the close of the week.

Low Mortality.—The remarkably low mortality rate of the month continued during the week ended June 27. The 454 deaths reported represent an annual rate of 12.54 per 1,000. For the twenty-seven days of the month the rate has been 12.70, as compared with 13.12 for June, 1902, and with an average of 14.12 for the ten Junes of 1893-1902 inclusive.

Personal.—Dr. Rachelle Yarros has gone to Europe for a year of study.——Dr. William L. Ballenger has been elected to the chair of otology, rhinology and laryngology, made vacant by the resignation of Dr. Moreau R. Brown.——Dr. Frank Allport has been elected clinical professor of ophthalmology in the Northwestern University Medical School.

Exercises at Rush.—On June 17, 180 students, including 6 women, received degrees at the convocation of Rush Medical College. Dr. Simon Flexner, Philadelphia, made the doctorate address on "An Era of Medical Discovery." Dr. Frank Billings, dean of the faculty, announced that the major portion of the $1,000,000 required to secure the $8,000,000 required for hospital and advanced clinical work had already been secured.

Englewood Hospital Incorporated.—A new corporation has been organized, known as the Englewood Hospital and Training School. This will succeed the Englewood Union Hospital, which will surrender its charter. The new institution is not for pecuniary profit. The plan contemplates the purchase of land for $20,000, on which will be erected a hospital building to cost $80,000, and to accommodate 148 patients, and this building will be equipped at a cost of $20,000.

MARYLAND.

Personal.—Dr. Lawrence C. Freeny, Pittsville, Wicomico County, has been elected resident physician and superintendent of the Peninsular Hospital, Salisbury.

Sanitarium for Liquor and Drug Habitues.—Dr. Edwin Geer of Baltimore has purchased 68 acres for $30,000 in Green Spring Valley, Baltimore County, and will build thereon a sanitarium for the treatment of persons addicted to liquor and drug habits. It will be called the Cecil Heights Sanitarium and will accommodate 23 patients. The consulting staff consists of Drs. H. M. Hurd, T. A. Ashby, C. G. Hill, J. D. Blake, Geo. J. Preston, John W. Chambers and Thos. S. Latimer, Baltimore.

Selects Site for Naval Hospital.—Surgeon-General Rixey, U. S. Navy, visited Annapolis last week to select a site for the naval hospital to be erected in the Academy grounds. The highest point in the grounds was chosen. A building several stories in height, with accommodations for about 100 persons, and to cost from $100,000 to $150,000, is contemplated. The "open-air" plan will be followed, and the wards will be separated so as to secure abundant light and ventilation. Wards for officers and men will be in different parts of the building.

Baltimore.

Operating Rooms Opened.—The new operating rooms of St. Agnes' Hospital were opened with formal ceremonies and a banquet June 25.

Adopts Standard Classification.—Health Commissioner Bosley, in order to preserve uniformity, has adopted the system of mortality statistics in use by the U. S. Census Office and approved by the American Public Health Association.

University Appointments.—At the University of Maryland Dr. John R. Winslow has been made clinical professor of diseases of throat and nose, Dr. R. H. Johnston demonstrator in the department, and Dr. Hubert Richardson demonstrator of physiologic chemistry.

Lowered Death Rate.—The cool weather kept down the death rate last week. The deaths numbered only 135, 26 being from consumption and 9 from pneumonia. The death rate per 1,000 was 12.50, the usual proportion of 1 to 2 between whites and colored being observed.

Echoes from the Crim Sale.—The medical books belonging to the Crim collection of antiques, etc., were sold last week, and with them the entire collection has been disposed of. The entire receipts amount to about $80,000. The 400 charts belonging to the late Professor Robey and used by him in his anatomic lectures brought only $32. The Bourgery anatomy, eight volumes folio, brought only $24. As previously stated, the University of Maryland Medical School ultimately received the great bulk of the estate. Dr. Crim's house brought only $100 at public sale, but it was much out of repair, and there was a large ground rent on it.

Personal.—Among those who sailed from this port to Bremen on June 27 were Drs. Henry L. Hilgartner, A. Crawford, W. A. Jack, Anna Johnston, and M. P. Tilley.——Dr. A. Kerr Bond has gone to England, where he will spend a month in the Manchester Children's Hospital.——Dr. T. P. McCormick will spend July at Groton, Conn.——Drs. Thomas McCrae and W. G. McCallum sailed for Europe June 27.——Dr. B. B. Lanier will spend the summer at the White Sulphur Springs, Va., and Dr. John A. Luetscher at Ocean City, Md.——Dr. A. H. Whitridge is in London.—Dr. John Turner is in London.——Or. C. C. Bombaugh will spend the summer at Newport.——Dr. L. McLane Tiffany sailed for Bremen on June 16.——Dr. J. J. Abell has received the degree of A. M. from the University of Michigan.

MASSACHUSETTS.

Boston.

Resignations Demanded.—Because of disobedience to rules, the resignations of the three senior surgical house officers of the Massachusetts General Hospital were demanded by the trustees and received by them. The trouble originated in a disturbance in the house officers' quarters, for which the seniors were held responsible.

The City's Health and Mortality.—Two weeks of rain have given Boston a death rate of 12.71 per 1,000 for the two weeks ending June 27, or a total of 283 deaths. Of this number 57 were under one year old and 85 under 5 years old. Pneumonia caused 26 deaths; heart disease, 26; bronchitis, 5, and marasmus, 5. There were reported 80 cases of diphtheria with three deaths; 55 of scarlet fever, with 1 death; 50 of typhoid fever, with 3 deaths; 103 of measles, with 4 deaths, and 29 of tuberculosis, with 32 deaths.

Floating Hospital in Commission.—The Boston Floating Hospital opens again for patients on Tuesday next. Dr. Robert W. Hastings will again serve as resident physician, and will be assisted by Drs. Milton G. Sturgis, John F. Fennessy, and Nathaniel L. Berry. Two junior house officers and six medical assistants, all advanced medical studeats, complete the house staff. Drs. Samuel Brick, Frederick Coggeshall and Arthur W. Fairbanks are the visiting physicians for this season. Arthur I. Kendall is to serve as the Fellow of the Rockefeller Institute for Medical Research, working to determine the relation of the Shiga bacillus to the cases of ileocolitis in the vicinity of Boston. No marked changes have been made in the hospital boat, but the various departments have been perfected for the best use of space in the very limited quarters.

NEW YORK.

A Gift from Rockefeller.—A gift of $25,000 has been received from John D. Rockefeller toward the fund of $60,000 being raised for a central building for the Stony Wold Sanitarium at Lake Rushaqua, New York.

Health Officer Dismissed.—At a meeting of the Rochester Common Council the recommendation of the public safety committee which has been investigating the recent smallpox epidemic in the city that Health Officer George W. Goler be dismissed, was adopted by the council.

Dr. Didama an Octogenarian.—On June 17, Dr. Henry D. Didama, Syracuse, dean of the medical profession of

Onondaga County; dean of the faculty of Syracuse Medical College; a member and once vice-president of the American Medical Association; some-time president of the New York State Medical Association, celebrated his eightieth birthday anniversary. Numbers of his friends called on the venerable physician, bearing congratulations and gifts. Save for his abundant white hair there was little in Dr. Didama's appearance to indicate the advanced age which he had attained. He entertained his guests with reminiscences of his early experiences when, fifty-two years ago, he entered on the practice of medicine.

Syracuse College Commencement.—On June 10, a class of 29 received diplomas and had the Hippocratic oath, as modified by Dr. Didama, administered by the adapter, at the commencement exercises of the Syracuse College of Medicine. The text of the oath is as follows:

JUSJURANDUM.

You, and each of you, do solemnly promise that, according to your ability and judgment, you will keep this obligation and stipulation.

That you will follow that regimen which, according to your best judgment, you consider to be for the benefit of your patients and abstain from whatever is injurious. That you will give no deadly medicine to anyone if asked, nor suggest any such counsel. That, with purity and holiness, you will pass your life and practice your art. That into whatever houses you enter you will go for the advantage of the sick, and will abstain from every act of mischief and corruption. That whatever, in connection with your professional practice, or not in connection with it, you may see or hear, you will not divulge, holding that all such things should be kept secret.

Do you so promise?

While you continue to keep this promise inviolate, may it be granted to you to enjoy life and the practice of your art, respected always by all men; but should you break through and violate this obligation, may the reverse be your lot.

Improvement in Care of Insane.—The New York State Commission of Lunacy has inaugurated a number of measures of improvement in the care of the insane during the past few months, including the reorganization of the Pathologic Institute where more than 60 medical men connected with the hospitals have been instructed during the past winter in clinical pathologic and physiologic psychiatric work. A system of medical interneship has been inaugurated in the hospital and nearly 30 have entered during the present year. Through the efforts of the commission, the legislature has recently passed an act appointing a medical inspector to the insane with 39 institutions under charge, which has never been inaugurated before, especially in the case of private asylums. Certain conditions and changes are projected, such as the foundation of a hospital on the colony system, the attachment of a tuberculosis hospital to three of the existing state institutions, the enlargement of the working colony, the inauguration of summer camps, the building of nurses' homes, officers' residences, etc. A bill providing for emergency commitments, as recommended by the Lunacy Commission, was passed by the legislature at its last session, which it is thought will be of great benefit, especially as regards urgent cases which were heretofore sent to jails and station houses. The food supply has been improved, and through the efforts of New York State, the federal government has passed a law making a limit of three years instead of one for deportation of alien insane, that is to say, immigrants becoming insane within three years after landing may be sent back to the country from which they came. The movement for the establishment of a reception hospital for acute curable cases in large cities has gained strength, and while the bill for a psychopathic hospital in New York City failed to pass, the attempt will be renewed with the next legislature, and it is hoped with success.

Buffalo.

Pure Water Investigation.—The Board of Aldermen has voted an appropriation of $2,000 for experts to investigate the requirements of a pure water supply for Buffalo.

Personal.—Dr. Roswell Park is ill with erysipelas.——Dr. Harvey R. Gaylord of the New York State Cancer Laboratory has recovered from his recent illness and has sailed for Europe.——Dr. Burt C. Johnson has returned from Europe.——Dr. Max Keiser will spend the summer in Vienna.——Dr. A. L. Benedict sailed for a six weeks' visit to Europe.

May Health.—The monthly health report for May shows an annual death rate of 15.69 per 1,000. The principal causes of death were as follows: Consumption, 39; diphtheria, 6; typhoid fever, 8; debility, 36; cancer, 14; apoplexy, 16; meningitis, 23; endocarditis, 10; valvular disease of the heart, 26; pneumonia, 48; appendicitis, 8; nephritis, 26; and violence, 40. Total deaths for May, 497, as compared to 422 for May, 1902.

Protest Against Goodsell-Bedel Bill.—At the regular quarterly meeting of the Erie County Medical Association, held June 8, 1903, Dr. A. A. Jones presiding, the following resolutions, presented by the committee on public health and charities, Dr. Julius Ullman, chairman, were unanimously adopted:

WHEREAS, There has recently been passed by the legislature of the State of New York an act to amend the public health law in relation to the establishment of public sanatoria, hospitals or camps for the treatment of tuberculosis; which act reads: "A hospital, camp or other establishment for the treatment of patients suffering from the disease known as pulmonary tuberculosis shall not be established in any town, by any person, association, corporation or municipality unless the board of supervisors of the county and the town board of the town shall each adopt a resolution authorizing the establishment thereof and describing the limits of the locality in which the same may be established.

WHEREAS, This bill, known as the Goodsell-Bedel bill, which has become effective by the signature of his excellency, the governor, makes it impossible for any city in the state, fraternal order or individual to establish such an institution except under conditions which are practically prohibitive; and

WHEREAS, Such sanatoria, hospitals and camps for consumptives, properly conducted, have proven most valuable in the treatment of tuberculosis, greatly decreasing the mortality rate and, by the observation of hygienic laws, have prevented the spread of the disease; and

WHEREAS, The location of such sanatoria actually relatively decreased the mortality from this disease in villages where so located as compared to other villages of like inhabitants; and

WHEREAS, There are in the State of New York many consumptive poor who are in urgent need of such sanatoria treatment; and

WHEREAS, This law, as enacted, is detrimental to the lives of thousands of citizens of this state now suffering from tuberculosis; and

WHEREAS, The spread of this disease, especially in crowded cities, will be augmented, thus making it an act of great injustice and inhumanity; therefore

Resolved, That the Erie County Medical Association urgently petition the legislature of the State of New York for its immediate repeal; and

Resolved, That copies of these resolutions be sent to his excellency, Governor Odell, the executive officers of the state and the senators and assemblymen representing this district at Albany.

New York City.

Cornell Commencement.—The fifth annual commencement of Cornell Medical College was held in New York, June 3.

Dog Muzzling Ordinance Passed.—Despite considerable opposition the board of aldermen, in response to a demand from the New York County Medical Association and from others familiar with what such legislation has accomplished in the way of controlling hydrophobia, has enacted the following ordinance:

Hereafter it shall be unlawful to permit any dog to go abroad at large in any of the streets, highways or public places in the City of New York unless such dog shall be securely muzzled so that it be impossible for it to bite, tear or otherwise wound with the teeth any human being or other animal.

Alleged Antitoxin Frauds.—As a result of the prosecution of a number of physicians for alleged procuring of antitoxin for sale under the pretense of distributing it without cost to indigent people, considerable indignation has been aroused among members of the profession, and this has found expression in resolutions of protest adopted by the East Side Physicians' Club, which are in part as follows:

Resolved, That the physicians of the East Side, in mass meeting assembled, deplore the circumstances and emphatically protest against the unmerited and summary procedure of the department of health, a procedure which demoralizes the community, offends the profession, and gravely injures the accused physicians and their families by branding them as common criminals.

So far, the defense has been that the physicians only charged a proper fee for the administration of the antitoxin, and did not charge for the antitoxin itself.

PENNSYLVANIA.

Gift to Hospital.—On May 14, the twenty-fifth anniversary of their wedding day, Mr. and Mrs. Horace Brock of Lebanon signified to the board of managers of the Good Samaritan Hospital their intention to present to the institution a home for nurses.

State Board Examinations.—From June 16 to 19, inclusive, the State Boards of Medical Examiners held simultaneously sessions in Pittsburg and Philadelphia. There were 391 applicants for license before the regular board. Announcements of results of the examinations will be sent to the applicants on July 31.

Legacy to University of Pennsylvania.—By the will of the late Dr. Spencer Morris, Mount Morris, a university graduate of 1871, the university is made his residuary legatee. The interest of the sum bequeathed, amounting to about $400, will be given each year to the student who shall pass the best examination for the degree of Doctor of Medicine.

Crusade Against Impure Foods.—The Dairy and Food Bureau, through its commissioner, continues its crusade against impure

foodstuffs. Retail dealers have recently been put under bail to answer in court to the charge of selling impure lard, cocoa and vinegar. There is a rumor that dealers will test the constitutionality of the law creating the Dairy and Food Commissioner.

Philadelphia.

Bathhouses Open for Season.—The thirteen public bathhouses of the city were opened for the season June 15. During the first week they were patronized by 122,086 persons.

Voodoo Doctor Guilty.—George P. Hossey, the negro herb doctor, charged with furnishing the wife of William G. Danz arsenic for the poisoning of the latter on June 26, was pronounced by the jury guilty of murder in the first degree.

Enforce Anti-Spitting Ordinance.—The superintendent of police has recently ordered police lieutenants strictly to enforce the ordinance of March 9, 1903, imposing a fine of $1 and costs for each offense of spitting on sidewalks, in public conveyances or places of public resort.

Physician Gets Fraction of Fee.—Dr. Walter C. Browning, it will be remembered, presented a claim of $350,000 for professional services against the estate of the late State Senator Chris L. Magee. The court's decision recently rendered in Pittsburg allows Dr. Browning $34,163.

Typhoid on the Wane.—Typhoid fever, which for months has been almost epidemic, has shown a marked decrease in the past few weeks. For the week ended June 20, 147 new cases were reported, as against 238 for the previous week. For the same period 37 new cases of smallpox were reported.

The Late Dr. Thomas G. Morton.—The faculty of the Philadelphia Polyclinic and College for Graduates in Medicine has recorded by resolutions its sense of deep loss in the death of Dr. Thomas George Morton, one of the founders of the institution and throughout the period of its existence successively professor and emeritus professor of orthopedic surgery.

University Commencement.—At the one hundred and forty-seventh commencement of the University of Pennsylvania, June 17, a class of 107 graduated in medicine. Honorary degrees were conferred on seven distinguished men. One of the latter was Colonel William Crawford Gorgas, U. S. Army, to whose sanitary administration at Havana is due in large measure the comparative immunity of that city from yellow fever and other contagious diseases. The degree of Doctor of Science was fittingly bestowed on Colonel Gorgas.

Strauss Gives Pasteurizing Plant.—In accordance with the plans of Dr. Edward Martin, director of the Department of Health and Charities, a central plant to provide at cost pasteurized and modified milk for infants is being established on Filbert, near 15th street. The proposed plant will prepare 10,000 gallons of milk daily. Private subscriptions will defray the expense of preparation. The plant is said to be the gift of Mr. Strauss of New York, and the Children's Aid Society will have charge of the distribution of the milk. Milk will probably be provided free of charge where parents are too poor to pay. A census of infants under one year is being taken by the police to determine where distributing stations are most needed. Four additional milk inspectors have been appointed, and it is the purpose rigidly to enforce the laws against the selling of impure or adulterated milk. Shops will be closed and fines imposed where fraud is detected.

Pollution of the Schuylkill.—The recent inspection of the Schuylkill River by Dr. A. C. Abbott, chief of the bureau of health, and a corps of assistants, in order to determine sources of pollution, has led to the conclusion that the water supply of Philadelphia could not be worse, and that its quality has not improved in the last five years, since the agitation for purity began. Filth of all description is thrown into the river, and as much of the pollution is outside the city limits, if any practical good is to come from the inspection, it must be by cooperation of the State Board of Health. The latter body will be asked to unite with the city officials in using all lawful means to prevent contamination of the river. Upper Roxborough's filter plant was placed in operation on June 26. It will finally filter about 18,000,000 gallons a day. It is at present limited to 8,000,000 gallons a day to allow the beds to ripen. To stop pollution of the Schuylkill, steps have been taken by the department of health to abate 76 nuisances in Manayunk. Chief Abbott has had printed and distributed to every householder "boil water" cards. The cards are provided with hangers, and are to be hung on water faucets. The notices read: "Important to householders.—Water containing typhoid germs is rendered harmless by boiling one minute. Boil water in the evening. Keep it in a clean, cool place over night. Keep free from dust."

GENERAL.

Colleges Combine.—The consolidation of the Saginaw Valley Medical College, Saginaw, with the Michigan College of Medicine and Surgery, Detroit, was consummated, June 29.

The Health of Cuba.—The monthly report of Dr. Carlos J. Finlay, chief sanitary officer for the Island of Cuba, says the showing for 1902 and the beginning of 1903 is very satisfactory, not only in regard to the complete exemption from yellow fever and smallpox, but also in the number of deaths from malaria and in the total mortality. There has been no smallpox on the island since July, 1900, nor yellow fever since September, 1901.

Frauds on Physicians.—A correspondent in Wisconsin has requested THE JOURNAL to warn its readers against two firms whose silvery-tongued solicitors have made him and many of his professional brethren yield their signatures and their money. The first is a "Medical Exchange," in which physicians are invited to buy stock, thereby securing the privilege of purchasing surgical instruments and supplies at considerably below market price. The exchange, it seems, is migratory, and is believed by some of its stockholders to be a fraud, as they have been unable to get money, goods or satisfaction from the concern. The second firm is a so-called "Art Publishing Company" of Chicago, which, he avers, has furnished him with engravings from worn-out plates, and thus far has failed to keep the premise implied in its contract of furnishing him in addition, free of charge, a premium ranging from a set of dishes or stem-winding watch (metal not being defined) to a musical instrument.

CANADA.

High Infant Mortality.—The Montreal health department has announced that one-half of the deaths in that city last week were of infants. The normal weekly death rate is about 115, but the total deaths last week amounted to 186, of which number 93 were children. It is considered that this high death rate is due to the inferior quality of the water supply.

No Federation of Universities in Maritime Provinces.—The alumni of King's College, Windsor, N. S., held an important meeting June 17, at which 300 members were admitted to the Alumni Association. The proposal to consolidate with Dalhousie University was warmly discussed and voted down. It is proposed to reorganize King's College, to reconstruct the faculty and to have a new dean.

Amalgamation of Trinity and Toronto Medical Colleges.—Progress has been made in this matter to the extent that the corporations of the two medical faculties have agreed to amalgamation. It now depends for final consummation on the action of the corporation of Trinity University whether they will accept federation with the University of Toronto. The meeting for this purpose will be held in the early part of July.

Vaccination By-Law Illegal.—Judgment has been rendered by Mr. Recorder Weir of Montreal declaring the vaccination by-law illegal in so far as it tends to prevent an employer from allowing his employes to enter any office or factory without holding a certificate of vaccination. Action had been taken by the city against a life assurance company for allowing an employe to frequent the office without the necessary certificate of vaccination.

Personals.—Dr. A. E. Garrow, Montreal, has returned home after three months spent in German hospitals.——Dr. R. Ernest McConnell of Volksrust, Transvaal, is visiting his father, Dr. J. B. McConnell of Montreal.——The following Toronto physicians have gone to England for the summer: Drs. F. LeM. Grasett, R. A. Reeve, Alexander McPhedran, D. King Smith, and Mr. Irving H. Cameron.——Dr. Arthur Jukes Johnson has been appointed chief coroner for the city of Toronto.

FOREIGN.

Mortality of European Capital Cities.—London's mortality for 1902 was at the rate of 18.64 per 1,000; that of Paris, 18.4; of Vienna, 19.4, and of St. Petersburg, 23.

Memorial Meeting in Honor of Gerhardt.—The late Prof. Carl Gerhardt of Berlin would have been 70 years old if he had lived to May 5. On that date a memorial ceremony was held at the Berlin Charité, addressed by Professor Martius of Rostock. A portrait of Gerhardt was presented by his assistants, to be placed in the medical clinic formerly under his charge.

New University Buildings at Berne.—The installation of the Berne University in its new quarters was duly celebrated June 4. The buildings have cost about a quarter of a million dollars, and on the campus a statue of Alb. von Haller is to be erected.

The Divided Twin Dying.—The young Hindoo, Radica, is slowly succumbing to the disease which caused the death of her twin sister from whom she was separated a year or two ago. She is confined to her bed and has been admitted to the "Cancer Home" at Paris as an incurable.

Study of Malaria in Russia.—The Russian National Medical Association, which honored the memory of Pirogoff by changing its name to that of the "Pirogoff Association of Russian Physicians," has equipped and sent out two expeditions for the study of malaria, one in the Caucasus and the other in the Woronesh province. The latter is in charge of the privat docent of bacteriology at Moscow, Dr. Berestnew.

Adulterated Milk.—A writer in the *Journal des Debats* attributes the high and increasing infant mortality of Paris and the provinces to the use of watered milk and the failure of the authorities properly to inspect the milk supply to hospitals. In Hanover, otherwise a healthy city, the infant mortality is said to be 60 per cent. higher than that of Washington, D. C., where strict inspection of milk is maintained.

Foreign Medical Students in France.—There are only four medical students from the United States inscribed in the French medical colleges at present. The number has not been above six since 1896 and 1897, when it was respectively 14 and 10. The more stringent regulations since then have reduced the total number of foreign students from about 1,054 to 585. The total number of French medical students has also diminished from 7,779 to 6,960.

Convalescent Home for Physicians in Germany.—The appeal for funds to erect a resort for convalescent members of the profession in Germany has been mentioned in these columns. It has already met with a response, as the director of the stock company exploiting the baths at Salzschlirf has donated a beautiful tract of land for the purpose at Ilbeshausen, Hess. Hills, dales and virgin forest combine to render it an ideal spot. A committee is to be appointed to solicit subscriptions and the project will probably soon be realized.

A Paris Physician Condemned for Larceny.—The *Journal de Méd. de Paris* gives the particulars of a case which has been pending in the courts for two years. A physician was accused of stealing some statuettes, an umbrella and some cosmetics at a large department store. He confessed that he took the goods to pawn them to get food to eat. He stated that he had only a single patient and that the latter was ill only at long intervals. The case was appealed, but the decision of the lower court was confirmed, condemning the physician to six months' imprisonment.

Medals for Victims of Professional Duty.—The Paris authorities have bestowed medals on seven nurses in the hospitals who during the past year have contracted a contagious disease from some patient in their care. The medal is awarded to "victims of professional duty." A pension is given the family of persons who have died "victims of professional devotion," referring to some exceptional act of self-sacrifice. This pension was recently awarded to the family of a young French physician in Algiers who himself proceeded to disinfect the premises where plague had occurred when no one else would approach the place.

The New Cancer Research Institute at Berlin.—In order to provide better facilities for von Leyden's research on cancer in connection with his medical clinic, the Berlin University authorities have erected a laboratory and two wards in the grounds of the Charité Hospital, near Koch's barracks, for this purpose. Each ward has eight beds with two private rooms. The institution was formally inaugurated June 8. Dr. F. Blumenthal has charge of the work, assisted by F. Meyer, L. Michaelis and the chemist Wolf. Loewenthal and Braunstein are voluntary assistants.

French Committee on Public Hygiene at St. Louis.—Professor Brouardel of Paris is president of the committee and Poix of the *Archives Gén. de Méd.* is secretary, with Ledé and Manson as assistants. The vice-presidents are E. Besnier, L. Labbé and Leroy des Barres. Bordas and A. Josias have been appointed to deliver addresses. All are prominent and well-known scientific workers. Josias' address on serotherapy of typhoid fever was one of the most interesting communications at the Madrid Congress. Labbé has been recently elected a member of the Institut, and his friends collected subscriptions to present him with a medal as a souvenir of the occasion. Brouardel's fame is international as a leader in hygiene and forensic medicine.

Measures Against Dispensary Abuse at Paris.—Lermoyez states that at the Saint-Antoine clinic of laryngology, etc., in his charge all applicants suspected of being capable of paying are given some soothing prescription and told to return in a week, urgent cases excepted. Their names and addresses are taken as usual, but are written on a pink slip as "suspects," and the pink slips are sent to the office, where they are given to the persons connected with the investigating force of the "medical aid at home" service. In due time the pink slips return marked "treatment refused" or "granted," as may be. These measures have been found necessary by the authorities in the various hospitals as the placards warning that the service is restricted to the poor have proved insufficient to check this abuse. Lermoyez's article in the last *Presse Médicale* is a very amusing sketch of the subject, describing his surprise when his attention was called one day to the fact that his charity service seemed to be becoming a gathering point for society people. He condemns in strong terms the practice which seems to be widespread at Paris for practitioners to send to this free service some of their pet, well-to-do clients with a letter commending them to the special attention of the physicians in charge. The dispensary abuse injures the poor, the tax-payers, and above all, the members of the profession. It is like making the man who is to be hung send out and buy the rope. He relates some curious examples of the abuse, and refutes the arguments that might be raised against the present plan, among others the plea that putting the patient off for a week might conflict with his leaving town if he lived in the country: "Why should the tax-payers of Paris pay for dilating the urethral strictures or curetting the adenoid vegetations of people who reside at the other end of France?"

Death Rate of British Towns.—Merthyr Tydvil, according to the registrar-general's report for 1902, is the deadliest town in Great Britain. It has an infant mortality of 185 per 1,000; it led all towns for death by violence, and was near the unenviable top as regards smallpox, fever and diarrhea. In order of decreasing deadliness come Liverpool, Wigan, Manchester, Middlesborough, Burnley, Hanley, Bootle, St. Helens, Newcastle-on-Tyne, Oldham, Preston, South Shields, Rhondda, Stockport, Sunderland and Birmingham. The healthiest of 76 great towns is Hornsey, where the death rate is only 9.80 per 1,000. This is much better than the whole of England and Wales, whose death rate is 16.28, and better even than the smaller towns and rural districts, whose rate is 14.80. Other most healthy great towns are Walthamstow, Leyton, East Ham, Willesden and Croydon; and the healthiest seaside towns of size are Bournemouth (13.05), Hastings (13.91), Yarmouth (15.50), and Brighton (15.59). London's rate is 18.64, which is well above the average, and places the metropolis forty-eighth on the list. The worst towns for measles were Burnley, Bristol, Barrow and Cardiff, and for scarlet fever West Bromwich, Burnley, Bolton, St. Helens and Wigan. Diphtheria was worst in Hanley, Rhondda and Middlesborough, and whooping cough in South Shields and Barrow. In London itself the healthiest suburbs are Hampstead (10.8—a shade below Hornsey), Stoke Newington (13.3), Wandsworth (13.5), Lewisham (13.6), Paddington (14.6). The worst places to live in are Finsbury, Southwark, Holborn, Bermondsey, Bethnal-green, Shoreditch, Stepney and the city. The year was a healthy one for London, and disease was much below the average, excepting smallpox, cancer, suicide and homicide. There were 329 deaths from horses and vehicles, 3,410 from other violence, 535 suicides, 71 homicides and 7 executions.

Correspondence.

The Transmission of Yellow Fever.

A REPLY TO DR. AGRAMONTE.

WASHINGTON, D. C., June 26, 1903.

To the Editor:—In connection with my paper published in THE JOURNAL of May 23 several statements made by my esteemed colleague, Dr. Aristides Agramonte, in his letter published in the JOURNAL of June 13, call for reply, and I beg to be permitted to submit the following necessary explanations: With manifest feeling Dr. Agramonte takes exception to the omission of his name in the early part of my paper—and natur-

ally too, in view of his lack of knowledge of the facts—and proceeds to show that I was in error in my statement that the decision to put the mosquito theory to a practical test was arrived at during a consultation between Drs. Reed, Lazear and myself. He then makes certain statements in regard to our late colleague, Dr. Lazear, with which, with one exception, I heartily agree, and which no one, so far as I know, has ever, openly or tacitly, attempted to deny or conceal. I am then accused of being an unbeliever at the time when I was bitten, and the letter closes with an arraignment of me for attempting to deprive Finlay of the "glory of his discovery," and an emphatic assertion of Finlay's right of priority.

In the first place Dr. Agramonte's name was omitted because he was not present at the meeting referred to, which took place at Columbia Barracks, where we were quartered, on the eve of Dr. Reed's departure for the United States in the beginning of August, 1900. As Dr. Agramonte resided in Havana and had a separate laboratory at Military Hospital No. 1, he was absent from many similar consultations. It is true, however, as he states, that he was present at a previous meeting, when the mosquito theory was brought up, and it is also true that the various theories and probabilities were the subjects of constant consideration and discussion. At the meeting in question Carter's observations pointing to a period of incubation or development in an intermediate host were brought up, so also was the erratic manner in which the disease seemed to jump from house to house, often across a street or farther, without intercommunication between the inhabitants, in other words the transmission of the disease through the atmosphere; the numerous points of resemblance between the modes of dissemination and seasonal occurrence of yellow fever and malaria, etc. These were not new topics, for they had been discussed almost daily, and a decision was promptly arrived at to put the mosquito theory to a practical test, and if that failed of result, to resort to anaërobic cultivations, particularly from the intestine. The serious nature of the work decided on and the risk entailed on it were fully considered, and we all agreed, as the best justification we could offer for experimentation on others, to submit to the same risk of inoculation ourselves. The fact of the meeting, the conclusions arrived at and the agreement to submit ourselves to the bites of contaminated mosquitoes are susceptible of proof, for they were stated by me in a letter written a few months later to the widow of our devoted colleague (Dr. Lazear) in response to her request for a detailed statement of the circumstances attendant on her husband's death.

I acknowledge frankly that I was, in a measure, an unbeliever at the time I submitted to inoculation, for the evidence Finlay presented was far from convincing, chiefly because he had worked in a hotbed of the disease. I was perfectly willing, however, to take a soldier's chances, and afterward enjoyed the satisfaction of being the first person to become aware, by actual proof, of the efficacy of the mosquito, and the first genuine case of experimental yellow fever on record. These facts are also susceptible of proof. There was strong ground for the assumption on the part of certain persons that I did not believe in the mosquito theory, even after I suffered my attack. During my convalescence I was plied with questions by Doctors Finlay, Guiteras, Agramonte and others who inquired whether the mosquito had anything to do with my attack. My replies were always evasive and intended to mislead, because of the necessity for the strictest secrecy to avoid premature publicity. I made only one exception in a medical officer of the regular army, now in Washington, whom I knew to be an intimate and trusted friend of Major Reed. As a matter of fact the results were not communicated to Dr. Agramonte until Dr. Reed was about to leave the island a second time, with the completed report to be read at the meeting of the American Public Health Association at Indianapolis in October, 1900. He then told me he was about to carry the paper into Havana and acquaint him with its contents; on his return he manifested much amusement over Dr. Agramonte's astonishment when the news was imparted to him.

Lastly, perhaps, it is natural that the Cuban ex-member of our board should desire to see Dr. Finlay awarded credit for the discovery, but Dr. Finlay is no more entitled to credit for the discovery of the mosquito theory of the transmission of yellow fever than Manson is for the discovery of a similar theory for malarial fever. The cases are precisely analogous, except that Finlay attempted to prove his hypothesis and failed; Manson did not enjoy the opportunity, and he gives full credit to Ross. According to the article cited by Agramonte (*Medical Record*, New York, May 27, 1899), Dr. Finlay is also entitled to credit for another discovery, viz.: that malarial infection is transmitted by flies from the bloody dejecta of patients, through the intermediation of food and beverages. Finlay here makes the statement that "Koch's assertion that 'where there are no mosquitoes there is no malaria,' is altogether too absolute."

Those who are interested in the subject of yellow fever are referred to the statements of Dr. George H. F. Nuttall of the University of Cambridge, in No. 2, Vol. III, of the *Journal of Hygiene*, which has just been brought to my notice.

JAMES CARROLL, M.D.

Pension and Accident Acts in New Zealand.

HUNTLY, N. Z.

To the Editor:—We have in this country much legislation which is somewhat experimental in type and nearly always socialistic in form. This is certainly very much of a haven for the laboring man. He has his old age pension, etc. There is one law which may prove of interest: "The Accident Compensation Act." An employer is responsible for all accidents occurring to his employes. The employer insures his men in an accident insurance company. The coal mine in this town pays over $1,150 per annum as a premium. I will give some cases showing the effect of the act.

I was called to the local coal mine to see a man who had fallen in the mine, causing an incised wound about 3 in. long over the spine and in the lumbar region. There was no apparent injury to the spine or cord. He was under my care for three weeks; the wound healed perfectly. The man was permitted to go to Auckland for a change. While there he apparently became worse and then returned to us with a diagnosis of traumatic neurasthenia. The accident compensation act gave the man half the daily wage he received before the accident. He also received aid from the local miners' accident society. The total amount received per week was more than he previously earned while at work. The company which carried the insurance for the mine sent an agent, who bought off the miner. The latter soon recovered and manifested enough energy to immediately walk four miles.

Another miner, while lifting, received a hernia, went to the local hospital and was operated on. He has received aid for the past four months.

I may say that an employer uses great care in selecting his men. One man with defective hearing, who was in the employ of the mine several years, was discharged when the act came into effect. He can now only secure employment on contract.

The friendly societies are now much of a disturbing element to the medical men of Auckland. They have decreased their fee of £1 ($4.85) per annum to 15 shillings ($3.60). The British Medical Association Branch in New Zealand opposed this and threatened to ostracize any who might accept the societies on such fees. The societies then established their own dispensary and called for four men, each to receive $1,940 per annum and act for the societies only. Three men were secured who will have under their care about 2,000 souls. The societies recently brought their grievance before the premier. He partially made a promise to place some new clause in the Arbitration and Conciliation Act, a board of which settles all disputes between the employer and the employe.

Recently the *Gracchus* from England via Africa brought smallpox to one of our many ports. This has brought to prominence a law not in the past closely adhered to. All children must be vaccinated within four months after registration of birth, unless the parents forward a statement that they are conscientiously opposed to vaccination. Public vaccinators are appointed for each district, and all vaccine is furnished by the public health department.

P. M. KELLER.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

EHRLICH'S TRIPLE STAIN.

ROUND LAKE, MINN., June 20, 1903.

To the Editor:—Please publish in your next issue of THE JOURNAL Ehrlich's "triple stain" for blood, and technic.

HENRY WIEDOW.

ANS.—It is given in von Jaksch's Clinical Diagnosis as follows: "Ehrlich's Triacid Mixture.—This consists of 115 c.c. of a saturated watery solution of orange-green; 125 c.c. of a saturated watery solution of acid fuchsin to which 20 per cent. alcohol has been added. To this are added 125 c.c. of a saturated watery solution of methyl-green and 77 c.c. absolute alcohol, the mixture being well shaken the while."

State Boards of Registration.

The New Michigan Law.

The amended Michigan law provides for a board of registration, five from the regular school, two each from the homeopathic and eclectic and one from the physio-medical school of practice. The governor may select such appointees from the latest lists furnished by the respective state societies of the said schools; such lists to contain at least treble the number of names that each society has members on the board. In case of failure to furnish such lists he may appoint according to his own judgment. All such appointees shall be legally registered physicians and graduates in good standing of reputable medical colleges and actively engaged in the practice of medicine for at least six years immediately preceding the time of appointment.

SECTION 3.—On and after the date of the passage of this act, all men and women who wish to begin the practice of medicine and surgery in any of its branches in this state, shall make application to the State Board of Registration in Medicine, to be registered and for a certificate of registration. This registration and certificate shall be granted to such applicants as shall give satisfactory proofs of being 21 years of age and of good moral character, but only on compliance with at least one of the following conditions contained in subdivisions one, two and three of this section:

First. The applicant shall be registered and given a certificate of registration if he shall satisfactorily pass an examination before the board on the following subjects: Anatomy, physiology, chemistry, pathology, materia medica and therapeutics, toxicology, histology, practice of medicine, surgery, obstetrics, gynecology, mental and nervous diseases, diseases of the eye, ear, nose and throat, bacteriology, hygiene, public health laws of Michigan and medical jurisprudence; said examination to be conducted as follows:

(a) The applicant shall pay a fee of $25.00 prior to examination. Provided, that the examination fee for graduates of any medical school in the State of Michigan, approved by said board, shall be the sum of $10.00.

(b) The examination shall be in writing, oral, or both.

(c) The questions on all subjects, except in materia medica and therapeutics and practice of medicine, shall be such as may be answered alike by all schools of medicine.

(d) The applicant shall, if possible, be examined in materia medica and therapeutics and practice of medicine by those members of the board, or by a qualified examiner appointed by the board, belonging to the same school as the applicant, and no applicant shall be rejected because of his adherence to any particular system of practice.

(e) An average percentage of at least 75 per cent. of correct answers shall be required from every candidate. No additional fee shall be charged by this board for the registration of those who successfully pass such examination. Provided, however, that such applicant for examination shall have a diploma from a legally incorporated, regularly established and reputable college of medicine within the states, territories, districts and provinces of the United States, or within any foreign nation (provided such foreign nation accord a like privilege to graduates of approved medical colleges of this state) having at least a four years' course of seven months in each calendar year, as shall be approved and designated by the board of registration in medicine. Also provided that such applicant shall have, previous to the beginning of his course in medicine, a diploma from a recognized and reputable high school, academy, college or university, having a classical course, or shall pass an examination equivalent at least to the minimum standard of preliminary education adopted and published by the board before examiners appointed by and in accordance with the regulations of aforesaid board, and at such time and place as the board may designate. Provided, a student entering a college in Michigan having a preliminary examination of a standard approval by the board of registration in medicine shall not be required to take this examination. Provided, that this requirement of preliminary education shall not apply to those students who, on the date of the passage of this act, were regularly registered as students of legally organized and reputable medical colleges approved of by said board. And provided, also, that the requirement of medical education shall not apply to those graduates of legally organized and reputable medical colleges approved of by said board who had graduated from such colleges previous to the date of the passage of this act, and students complying with the other provisions of this section who on January 1st of the present year were regularly registered as students of legally organized and reputable medical colleges of this state, approved of by said board, may obtain a certificate of registration as graduates of such colleges and without examination by the board on payment of a fee of $10.00. The board of registration in medicine shall, from time to time, adopt and publish a minimum standard of medical education, and no medical college shall be approved and designated by said board under this subdivision one, of section three, unless, in the judgment of the board, it conforms with such standard.

Second. The applicant shall be registered and given a certificate of registration if he shall present a certified copy or certificate of registration or license which has been issued to said applicant in any foreign nation where the requirements of registration shall be deemed by said board of registration in medicine to be equivalent to those of this act. Provided, such country shall accord a like privilege to holders of certificates from this board. The fee for registration from applicants of this class shall be $25.00.

Third. The applicant shall be registered and given a certificate of registration if he shall present a certified copy of certificate of registration or license which has been issued to said applicant within the states, territories, districts or provinces of the United States where the requirements for registration shall be deemed by the board of registration in medicine to be equivalent to those of this act, and shall otherwise conform to the rules and regulations agreed on between the state board of which he is a licentiate and said board relative to the recognition and exchange of certificates between states. Provided, such states shall accord a like privilege to holders of certificates from this board. The fee for registration from applicants of this class shall be $25.00.

Fourth. If any person shall unlawfully obtain and procure himself to be registered under this section, either by false and untrue statements contained in his application to the board of registration in medicine, or by presenting to said board a false or untrue diploma or license, or one fraudulently obtained, he shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by a fine of not less than $300.00 nor more than $500.00, or, imprisonment at hard labor for not less than one year, nor more than three years, or both, at the discretion of the court, and shall forfeit all rights and privileges obtained or conferred on him by virtue of such registration as a physician or surgeon.

Fifth. Any person who shall swear falsely in any affidavit or oral testimony made or given by virtue of the provisions of this act, or the regulations of the board of registration in medicine, shall be deemed guilty of perjury and, on conviction thereof, shall be subject to all the pains and penalties of perjury.

Sixth. The board of registration in medicine shall refuse to issue a certificate of registration provided for in this section to any person guilty of grossly unprofessional and dishonest conduct of a character likely to deceive the public, and said board shall, after due notice and hearing, revoke a certificate issued subsequent to the date of the passage of this act, or subsequent to the date of the passage of Act No. 237 of the Public Acts of 1899, for like cause or for offenses involving moral turpitude, habitual intemperance, the drug habit, or for fraud or perjury in connection with obtaining of a certificate of registration or for a certificate obtained or issued through error, when such offenses shall have been legally established in a court of competent jurisdiction. And, provided further, after the passage of this act, the board may, at its discretion, revoke the certificate of registration, after due notice and hearing, of any registered practitioner who inserts any advertisement in any newspaper, pamphlet, circular, or other written or printed paper, relative to venereal diseases or other matter of any obscene or offensive nature derogatory to good morals.

SEC. 7.—Any person who shall practice medicine or surgery in this state without first complying with the provisions of this act, or any person who shall violate its provisions (except as heretofore provided in Section 3 of this act) shall be deemed guilty of a misdemeanor and, on conviction thereof, shall be punished by a fine of not more than $100.00, or by imprisonment in the county jail for a period of not more than ninety days, or by both such fine and imprisonment, for each offense. It shall be the duty of the prosecuting attorneys of the counties of this state to prosecute violations of the provisions of this act.

Marriages.

R. B. USSERY, M.D., to Miss Buyde Allen, both of Shiloh, Tenn., May 21.

JOHN OSCAR ELROD, M.D., to Miss Eyleen Roberts, both of Forsyth, Ga., June 10.

ROWLAND H. HARRIS, M.D., to Elizabeth M. E. Kerr, at Battle Creek, Mich., June 18.

S. LEO OREN, M.D., Lewistown, Ill., to Miss Helen A. Wise of Davis, Ill., June 11.

DON ALVADOR BARNHART, M.D., to Miss Susie Hammett, both of Huntsville, Mo., June 10.

GREEN EWING HILL, M.D., Girard, Ill., to Miss Hattie N. Miner of McVey, Ill., June 10.

MINOR H. DAY, M.D., Donora, Pa., to Miss L. Jean Mechling of West Sunbury, Pa., June 3.

ELMER D. GARDNER, M.D., Hancock, Mich., to Miss Lulu Skinner of Flint, Mich., June 30.

GEORGE T. MEACHAM, M.D., to Miss Carrie Reed, both of Taylorville, Ill., at Vandalia, June 9.

JAMES ARTHOUP VAN HORNE, M.D., Chicago, to Miss Lutie Huntoon of Waterford, Mich., June 10.

ERNEST M. FREEMAN, M.D. Long Beach, Cal., to Mrs. Jessie E. Zavitz of Westminster, Cal., June 3.

FRANK KENWORTHY, M.D., to Miss Eleanor Selene Seebick, both of East End, Pittsburg, Pa., June 17.

RICHARD W. MCCRACKEN, M.D., Union Grove, Wis., to Miss Anna B. Wetmore of Beloit, Wis., June 17.

WALTER N. CHINN, M.D., Hague, Westmoreland County, Va., to Miss Emily Baskerville of Dinwiddie County, Va., June 25.

Deaths.

Isaac Newton Love, M.D.

The many friends of Dr. I. N. Love were shocked to hear of his sudden death, for he was supposed to be in excellent health. Isaac Newton Love was born in Barry, Ill., Sept. 13, 1848, and was, consequently, nearly 55 years of age at the time of his death. At the age of 13 he went to St. Louis to live in the family of his uncle, Dr. J. T. Hodgen, the famous surgeon. After a high-school course he entered the St. Louis Medical College, and was graduated from that institution in 1872. He served as an interne in the St. Louis City Hospital for two years, and then became assistant to Dr. Hodgen. He devoted his attention chiefly to diseases of children, and built up a large practice. For a time he was city physician of St. Louis, and was also instructor in physiology in the college from which he graduated. In 1887 he was elected president of the Mississippi

ISAAC NEWTON LOVE, M.D.

Valley Medical Association, and in the same year was made secretary of the Pediatric Section of the Ninth International Medical Congress. In 1889 he was appointed professor of pediatrics in the St. Louis College of Physicians and Surgeons. He was elected a trustee of the American Medical Association in 1889, and was three times re-elected, serving continuously as a trustee until 1901. In 1893 he was elected vice-president of the American Medical Association, and in 1889 he presided over the Section of Diseases of Children. He founded the *Medical Mirror* in 1890, which he conducted up to the time of his death. He was professor of diseases of children in the Marion-Sims College of Medicine of St. Louis, preceding his removal to New York.

Three years ago he left St. Louis and located in New York City, where he established himself, and was prepared, as he said, to do the best work of his life. In the short time he was there he succeeded beyond expectations in building up a large practice, and his life gave promise of a practice and a social position equal to that which he once enjoyed in St. Louis. On May 29 he went abroad with a patient who had been operated on by Dr. W. T. Bull, and after seeing her comfortably located in Paris, he returned, sailing on the *Aurania*. He appeared remarkably well and happy, and was exceedingly popular on shipboard. He frequently expressed himself as feeling ten years younger, and manifested his good feelings and high spirits in his customary exuberant way. He was chosen by the passengers to present to the captain and officers of the steamer, resolutions of commendation and thanks, and on June 18, while the steamer was in New York Harbor and nearing her pier, he had risen to perform this pleasant task, had read the resolutions and was delivering the presentation speech in his usual happy and felicitous manner when he suddenly clapped his hand to his head, fell to the deck and died in his cabin a few minutes later. The cause of his death was probably rupture of a blood vessel of the brain. He leaves a widow and two children, Delphine and Hodgen, the latter being about 18 years of age.

Dr. Love probably had as large a personal acquaintance among the members of the medical profession in America as any one physician. He was a man of remarkable social qualities and personal attractiveness, and this made him a most agreeable and genial companion. As one of his old associated says of him, he was fond of his friends, faithful to them, and remarkably free from all petty personal or professional jealousies. He was optimistic in his nature, and generally saw the silver lining of passing clouds. He had a genial and friendly disposition. On the day of his death the Editor of THE JOURNAL received a congratulatory letter written by Dr. Love, while in England, in which he spoke enthusiastically of his trip and of his prospects in New York.

The funeral services were held June 22, at St. Paul's Methodist Episcopal Church, New York. The body will eventually be interred in St. Louis.

Orpheus Everts, M.D.

In the death of Dr. Orpheus Everts, at his home in College Hill, Cincinnati, June 19, the profession has lost a man of most attractive personality, a physician of broad attainments and power, and an alienist of more than national repute. Orpheus Everts was born Dec. 18, 1826, in Salem Settlement, Union County, Indiana. He studied medicine under the direction of his father, Dr. Sylvanus Everts, and was graduated from the Indiana Medical College, La Porte, in 1846. At the opening of the Civil War he went to the front as major-surgeon of the 20th Indiana Volunteer Infantry, in which position he remained throughout the war. At the close of the war he devoted his attention especially to diseases of the nervous system; in 1866 he was appointed superintendent of the Indiana Hospital for the Insane at Indianapolis, and filled this position for eleven years. He was also professor of nervous and mental diseases in the Medical College of Indiana. He became well known as an alienist, and had a large consultation practice. He was frequently called on to testify in important medicolegal cases, notable the trial of Guiteau for the assassination of President Garfield.

Since 1880 he has been made superintendent of the Cincinnati Sanitarium. He had been a member of the American Medical Association for a number of years, and was a member of the Ohio State Medical Association and of the Cincinnati Academy of Medicine. One of the last acts of his professional life was to prepare a paper for the Section on Nervous and Mental Diseases of the American Medical Association, for the New Orleans meeting. This paper will appear in THE JOURNAL at an early date.

He had been ill for some weeks. He is survived by a widow, a son—Dr. C. C. Everts of Indianapolis—and two daughters.

John W. F. Moore, M.D. Jefferson Medical College, Philadelphia, 1894, a member of the American Medical Association, Pennsylvania State Medical Society, and some time president and treasurer of the Butler County Medical Society. He was accidentally killed, June 13, by a fall into an unguarded areaway between two buildings. A fracture of the skull at the base of the brain was sustained, and although he lived twelve hours he never regained consciousness. He was 35 years old.

Henry Melville Chase, M.D. Dartmouth Medical College, Hanover, N. H., 1863, formerly an assistant surgeon in the United States Navy, and since 1866 a resident of Lawrence, Mass., died suddenly at his home in that city, June 15, from heart disease, aged 65. He was a member of the Massachusetts Medical Society and of the Lawrence Medical Club, and for several years served Lawrence as a city physician.

Charles F. Deetken, M.D. Long Island College Hospital, Brooklyn, N. Y., 1874, one of the oldest practitioners of Council Bluffs, Iowa, died suddenly at his home in that city, June 19, from heart disease, aged 61. The Council Bluffs Medical

Society, at a special meeting held June 20, adopted resolutions in memory of Dr. Deetken.

Arthur E. McBride, M.D. Louisville Medical College, 1883, died at his home in Sterling, Ill., June 12, from tuberculosis, after an illness of two years, aged 42. He was a member of the Illinois State Medical Society, the North Central Illinois Medical Society, and was retiring president of the Whiteside County Medical Society.

Edward W. Parker, M.D. Medical College of Ohio, Cincinnati, 1872, a member of the American Medical Association, president of the pension board of Gallia County, Ohio, and formerly assistant physician at the Columbus State Hospital for the Insane, died suddenly from heart disease at his residence in Gallipolis, aged 53.

David R. Francis, M.D. College of Physicians and Surgeons, New York, 1866, aged 60, was found dead in his office in Mansfield, Ohio, June 11, under circumstances suspicious of foul play, as a pocketbook which contained a large amount of money was missing, and as a severe contusion was found on the head.

William Winthrop Betts, M.D. Albany (N. Y.) Medical College, 1883, a specialist on climatology, who was obliged to leave Minneapolis on account of his health, went to Utah, and later to Southern California, died at the Christian Hospital, Los Angeles, June 15, from Bright's disease, after a long illness, aged 41.

Anthony L. Carrick, M.D. College of Physicians and Surgeons, Dublin, Ireland, 1852, of Cincinnati, for two terms coroner of Hamilton County, Ohio, and during the Civil War was surgeon of the Second Tennessee Cavalry, died suddenly from paralysis, June 22, at the home of his son-in-law in East Walnut Hills, aged 79.

Alden Edward Bessey, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1870, a member of the Maine Medical Association, and sometime president of the Kennebec County Medical Society and the Waterville Clinical Society, died at his home in Waterville, Maine, June 15, aged 65.

William Harrison Foster, M.D. Medical College of Georgia, Augusta, 1867, professor of materia medica and therapeutics in that institution, for twenty years city physician of Augusta, died at his home in that city, June 17, from cholera morbus, after a short illness, aged 63.

Delos L. Heath, M.D. University of Michigan, Ann Arbor, 1853, died at his home in Seneca Falls, N. Y., June 10, from heart disease, after an illness of a few weeks, aged 75. During the Civil War he served as surgeon in the Twenty-third Michigan Volunteer Cavalry.

Nelson H. Henderson, M.D. College of Physicians and Surgeons, Chicago, 1886, a member of the American Medical Association, died at the Lakeside Hospital, Chicago, June 23, from septicemia following infection received while operating, May 13, aged 45.

Marion Jasper Dudley, M.D. Macon (Ga.) Medical College, 1856, one of the oldest physicians in the state, a captain-surgeon in the Civil War, and who was born and lived all his life in Gordon County, Georgia, died at his home in Sonoraville, June 20, aged 75.

Thomas J. Buchan, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1884, was shot and instantly killed at his home in Eastman, Ga., June 14, by his son, who was endeavoring to protect his mother from his father's violence.

Charles H. David, M.D. Victoria Medical College, Montreal, P. Q., 1878, a specialist in diseases of the ear, nose and throat, Bridgeport, Conn., died at the home of his brother in Waterbury, Conn., June 18, after a lingering illness, aged 47.

George W. Chrouch, M.D. Middlebury (Vt.) Medical College, died from the effect of an overdose of morphin, at his home in Shaftsburg, Mich., June 19, aged 59. He was a member of the American Medical Association.

Thomas Hammill Hicks, M.D. Medico-Chirurgical College, Philadelphia, 1887, an eminent chemist and metallurgist, died at his home in Fort Wayne, Ind., June 6, from angina pectoris, after a short illness, aged 52.

David B. Fonda, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1878, for four years county physician of Cook County, Ill., died in Jefferson Park, a suburb of Chicago, June 20, aged 68.

Thomas T. Marshall, M.D. Kentucky School of Medicine, Louisville, 1884, died at his home in Floydsburg, Ky., June 26, from abscess of the liver, after an illness of two months, aged 43.

Francis A. Miles, M.D. Medical College of the State of South Carolina, Charleston, 1854, died from paralysis at his home in Greenville, S. C., June 16, after an invalidism of seven years.

Fred C. Miller, M.D. Bennett College of Eclectic Medicine and Surgery, 1883, county physician of Pierce County, Wash., died from diphtheria at his home in Tacoma, June 7, aged 45.

Marion F. Marble, M.D. American Medical College, Cincinnati, 1855, died at his home in Gardiner, Maine, June 15, from paralysis, after an invalidism of fourteen years, aged 77.

Moses J. Bushenville, M.D. Barnes Medical College, St. Louis, 1899, of Bowbells, N. D., died at a hospital in Minot, June 20, from typhoid fever, after an illness of a week, aged 35.

Frank H. Crocker, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1882, died from pneumonia at his home in Gardiner, Maine, after an illness of one week, aged 51.

A. E. Levinson, M.D. University of Minnesota, Minneapolis, of Duluth, Minn., died in St. Mary's Hospital, Duluth, June 19, one day after an emergency operation for appendicitis.

Francis Ferdinand Marshall, M.D. College of Physicians and Surgeons, New York, 1886, of New York City and Jacksonville, Fla., died in the former city, June 21, from cancer.

Harry G. Forrest, M.D. Chicago Homeopathic Medical College, 1893, of Jackson Center, Pa., died at Greenville, Pa., from heart disease, June 9, after a long illness, aged 38.

Edward P. Luce, M.D. Cincinnati College of Medicine and Surgery, 1862, a surgeon during the Civil War, died at his home in Bayonne, N. J., June 12, aged 75.

J. N. Perkins, M.D. Columbus (Ohio) Medical College, a member of the Oregon legislature in 1863, died at his home in Eagle Harbor, Ore., June 10, aged 87.

Theodore Connell, M.D. University of Pennsylvania, Philadelphia, died at the home of his father in Scranton, Pa., June 15, after a prolonged illness, aged 32.

George N. Jennings, M.D. Rush Medical College, Chicago, 1864, formerly of Tonica, Ill., died suddenly from heart disease at Covina, Cal., June 1, aged 65.

John C. Halstead, M.D. New York University, 1883, died at his home in New York City, June 17, after a prolonged illness, from tuberculosis of the bladder.

Jacob A. Bollinger, M.D. Missouri Medical College, St. Louis, 1879, of Oakford, Ill., died, June 3, at the Jacksonville Sanitarium, after a long illness.

Hiram A. Phillips, M.D. University of Louisville, 1875, died at his home in Lexington, Ky., June 18, after an illness of several months, aged 52.

W. T. Herrington, M.D. American Medical College, St. Louis, 1889, died at Grant's Pass, Ore., June 17, from paralysis, after a long illness.

Mordecai J. Ambrose, M.D. Medical College of Ohio, Cincinnati, 1837, died at his home in Cincinnati, June 5, after a long illness, aged 89.

Francis Grandy, M.D. University of Michigan, Ann Arbor, 1852, Fairfield, Mich., died in Adrian, Mich., June 19, aged 75.

Sterling Loomis, M.D. Yale Medical School, New Haven, 1898, died recently from heart disease, aged 30.

Deaths Abroad.

F. Saxer, M.D., professor and prosector at the Institute of Pathologic Anatomy at Leipsic, aged 40. He had been connected with the similar institute at Marburg, and had published many articles on the development of the blood corpuscles and lymph glands, on syringomyelia, gliomata and epithelial tumors of the central nervous system, dermoids and teratomata, pneumonomycosis aspergillina, etc. His death was due to an abscess in the brain, which developed from an apparently insignificant infection of one hand.

M. Huizinga, M.D., formerly professor of physiology at Groningen, died there June 2, aged 63. He was particularly interested in chemotaxis, the physiology of the nerves, albuminoids, peptones, etc., and contributed many articles to science on these subjects as also on ozone from the chemical and biologic standpoints, and on the history of physiology, etc.

Joseph De Smeth, M.D., formerly professor of psychiatry and general pathology at Brussels, died there June 10. He was one of the leading alienists of Europe, and had for many years had charge of the unfortunate Princess Carlotta, widow of Maximilian.

J. Iszlay, M.D., professor of odontology at Budapest.

Miscellany.

The Twenty-fifth Anniversary of Dr. Victor C. Vaughan's Graduation.

On the 18th of June, in the presence of the alumni students, colleagues and friends, a volume of contributions to medical research, containing 34 papers, was dedicated and presented to Dr. Victor C. Vaughan by his colleagues and former students in honor of the twenty-fifth anniversary of his doctorate.

Pres. James B. Angell announced that it was his pleasant duty as official head of the university to express the feelings of the authorities as well as of the alumni and undergraduates on this interesting occasion. The custom, as borrowed from the Germans, of thus recognizing the services of a man who had been of eminence and use was a very pleasant one. He was one of those present who was old enough to remember Dr. Vaughan when the latter was very young. He alluded to the changes that have been made in medical education from what it had been in times past. In earlier times the instruction was very largely given by lectures, and some members of the faculty strenuously urged that it was far more profitable for a student to go through a course and hear the same lectures the second time than to hear them the first time. We must not interpret too literally as correct that view of the case.

The laboratory course had come into use since the period of which he spoke, and it was due very largely to the dean of the department, with doubtless the assistance of his associates, that so great emphasis is now placed on this new and more profitable mode of scientific instruction. He could hardly speak in detail of the important part Dr. Vaughan has played during the past twenty-five years, but it was with very great pleasure that those who had witnessed his career as a student had seen him early fulfilling the promise which he had then given of the brilliant scientific discoveries which he has made, and that that promise had been more than redeemed up to the present time, so that his name is well known, and the name of the medical department of the university through him, not only in this country, but also in all European countries. Dr. Angell said that he was sure that every one connected with the university feels grateful to Dr. Vaughan for the services he has rendered, and they were still glad to look into his face and see that he is still a young man and has doubtless a long career yet before him, and all would be very glad to come here twenty-five years hence to another and more imposing celebration.

Prof. Albert B. Prescott of the University of Michigan made the presentation on behalf of the contributors. Professor Prescott said he was honored in being asked to say something in the presentation of this gift. It was a privilege as well as an honor to speak on the part of those contributors who were the most cherished and influential of the medical alumni of the university. In making this gift a memorial volume had been wrought out piece by piece in the unwearied toil of strenuous life. For its making we have a quarter of a century, a period in the life time of an alumnus, an era in the history of the university. This Festschrift is a symposium of scientific learning, a production of permanent value and an essential record of the advancement of science and of the profession of medicine. It consists of thirty-four separate investigations, each one a chosen product of its author's personal power.

If he were competent to speak of these records of researches, he would not have time to even enumerate them, but he recognized that they were from members who had become authorities in the world, by their work and experience in scientific pursuits. As he looked over the titles he saw that they formed a syposium of research covering the fundamental principles and presenting a series of discoveries, which unite together naturally and inevitably to constitute a tribute of honor to the man to whom the gift was being made. The book belongs to him by virtue of its history and by virtue of its subject matter. It was an acknowledgment of the service he had rendered to the world of science and to the university, to the cause of medical education, to advances in scientific work wherever undertaken.

In accepting the volume Professor Vaughan modestly said that the world had been more than kind to him, that he had received many honors which might have been more worthily worn by others, but he never had received one which he appreciated more highly than the present one. He owed much to the University of Michigan. After he had secured the best education possible in his native state, the state of Michigan offered him what he desired in his further studies and within the range of his scanty purse. Whatever he had done and whatever he might do in the future, will hardly repay the University of Michigan for what it had done for him. That was his feeling toward the university. He also acknowledged his indebtedness to those who make up the university, for their assistance and co-operation, those with whom it had been a pleasure to be and an inspiration to work to be associated with them. Of all the research work he had ever done the greatest and best was that, by the authority of the board of regents, he had been able to collect together a faculty of medicine, every member of which was a master in his specialty. It is easy enough to have a good medical school if you have a good faculty and good students. He owed much to the students, and the spirit for good, honest work, and the inclination to be gentlemanly and honorable had always prevailed among the student body of the university. It was an honor that he had been associated as teacher with some of the greatest scientific men of the country; but they did not owe their eminence to him; they would have been great, and probably greater still, had their instruction been received from others. He wanted to specially express his thanks to him from whose hands he had received this volume. Dr. Prescott was the Nestor of scientific research in the university then as he is now, and from him more than any other man he had received his inspiration. President Angell had explained how his classmates and himself got through the university. It was necessary in order to get them through that the lectures be repeated for two succeeding years, and in this way they were finally nourished sufficiently to become doctors and to be turned out on the world. In accepting this volume he would not regard it as a trophy of any achievement, but as a tribute of love and respect, which he prized more highly than anything else. He expected to derive from it inspiration for further work and find comfort from it in his hours of rest. When he is through with it he will bequeath it to his children as his most valuable earthly possession. He took it that the volume was presented to him as a result of the spirit of scientific research of those who have made these contributions, and he hoped the honorable board of regents would grant him the privilege to give a word of advice and to say that we should encourage the young man who is able to do scientific work. It was not until experimental research came in that the world began to grow and develop. It is scientific research that has made the German universities the centers, not only of science, but of letters as well. Scientific research has not always found a most congenial atmosphere in American universities; it has not always been appreciated as much as it might be. The question is, whether the American university of to-day is to become a center of evolution of knowledge and discovery or only an enlarged and amplified high school. Has not the state the right to ask of its universities the very best knowledge possible on every subject in which the welfare of the people may be involved? In conclusion he said he could not adequately express his feelings, but wished to thank all for this highly appreciated gift.

Medical Organization.

Jackson County (Miss.) Medical Society.

At an adjourned meeting held in Scranton, June 10, the new constitution, in conformity with those of the Mississippi State Medical Association and the American Medical Association, was adopted.

Ellis County (Texas) Medical Society.

Twenty physicians of Ellis County met at Waxahachie, June 16, and organized a county medical society, with Dr. James C. Loggins, Ennis, president, and Dr. Charles W. Simpson, Waxahachie, vice-president.

Jefferson County (Wis.) Medical Society.

Fifteen physicians of Jefferson County met at Watertown, June 16, and organized a county medical society, electing Dr. William W. Reed, Jefferson, president, and Dr. Charles E. Lander, Johnson Creek, secretary.

Chickasaw County (Iowa) Medical Society.

Physicians of Chickasaw County met recently at New Hampton and organized a county medical society, with Dr. Ira K. Gardner, president, and Dr. Nicholas Schilling, secretary and treasurer, both of New Hampton.

Grand Forks County (N. D.) Medical Society.

Twenty physicians of the county met at Grand Forks, June 10, to form a county medical society. A temporary organization was effected, and Drs. Henry H. Healy and John D. Taylor, Grand Forks, and Dr. Willam H. Welch, Larimore, were made a committee on organization to report at a meeting to be held this month.

Hillsborough County (Fla.) Medical Society.

At the regular monthly meeting, held at Tampa, June 2, the constitution and by-laws as recommended by the American Medical Association was unanimously adopted. The following officers were elected: President, Dr. Urban S. Bird; vice-president, Dr. James T. Green; secretary-treasurer, Dr. W. Parks Adamson; board of censors, Drs. W. P. Lawrence, Leslie W. Weedon, and John S. Helms, all of Tampa.

San Luis Obispo County (Cal.) Medical Association.

A number of physicians met at San Luis Obispo, June 6, and organized a county medical association with the following officers: Dr. Joseph S. Jackson, San Luis Obispo, president; Drs. John K. McLennan, Paso Robles, and Byron F. Dawson, Cayucos, vice-presidents; Dr. E. A. Dial, San Luis Obispo, secretary, and Dr. J. J. Knowlton, San Luis Obispo, treasurer. The association will apply for affiliation with the state medical society.

Fairfield County (Ohio) Medical Society.

Under the direction of Dr. Theodore W. Rankin, Columbus, the physicians at Fairfield County organized a county medical society at Lancaster, June 16, with the following officers: President, Dr. John H. Goss, Lancaster; vice-president, Dr. George S. Courtright, Lithopolis; secretary, Dr. George O. Beery, Lancaster; treasurer, Dr. Samuel Renshaw, Sugar Grove, and censors, Drs. John J. Silbaugh, Lancaster; Oliver P. Driver, Bremen, and E. N. Heston, Thurston.

Pottawatomie County (Iowa) Medical Society.

About 40 physicians of the county met in Council Bluffs, June 17, and organized a county medical society, with Dr. Donald McCrae, Council Bluffs, president; Dr. Samuel W. Tobey, Oakland, vice-president; Dr. F. W. Dean, Council Bluffs, secretary; Dr. Grant Augustine, Minden, treasurer, and Dr. Henry B. Jennings, Council Bluffs, delegate to the Iowa State Medical Society. The society adopted the constitution and by-laws suggested by the American Medical Association.

Indianapolis Medical Society.

At its meeting held June 23, the Indianapolis Medical Society, the medical society of Marion County, Ind., by unanimous vote, adopted the constitution and by-laws as suggested by the American Medical Association. While the constitution and by-laws of the Indianapolis society were satisfactory to the local profession, yet in the interests of uniformity and harmonious work, and to set an example which would influence other societies, this body cheerfully fell in line with the new movement in this respect, as it is doing in others. The membership of this society has now reached 220, and it is hoped to greatly increase this number in the immediate future.

Societies.

Butler County (Pa.) Medical Society.—At the annual meeting, Dr. John E. Byers was elected president; Dr. Robert J. Grossman, vice-president, and Dr. William B. Clark, secretary, all of Butler.

Newcastle County (Del.) Medical Society.—At the annual meeting in Wilmington, June 19, Dr. Frank Belville, Delaware City, was elected president; Dr. R. Raymond Tybout, Wilmington, secretary, and Dr. Peter W. Tomlinson, Wilmington, treasurer.

Southern Oregon Medical Association.—The twelfth annual meeting was held in Medford, May 12. Dr. H. Percival Hargrave, Phoenix, was elected president; Dr. George E. Houck, Roseburg, vice-president, and Dr. Robert E. Smith, Grant's Pass, secretary and treasurer.

West Tennessee Medical Association.—The twelfth annual meeting was held in Jackson, June 11 and 12. The following officers were elected: Dr. William T. Watson, Lexington, president; Drs. D. Warren Seates, Martin, and Robert W. Tate, Bolivar, vice-presidents, and Dr. Isaac A. McSwain, Paris, secretary and treasurer.

Southwestern Kentucky Medical Society.—This society met, May 12 and 13, at Paducah, and elected the following officers: Dr. Horace T. Rivers, Paducah, president; Drs. E. B. Shelton, Blandville, and Charles N. Crawford, Lynn Grove, vice-presidents; Dr. Van A. Stilley, Benton, secretary, and Dr. Charles H. Brothers, Paducah, treasurer.

Spokane County (Wash.) Medical Society.—At the annual meeting held in Spokane, May 7, the following officers were elected: Dr. Edwin L. Kimball, Spokane, president; Drs. Harry S. Martin, Spokane, and H. H. Slater, Deer Park, vice-presidents; Dr. George A. Gray, Spokane, secretary, and Dr. William L. Hall, Spokane, treasurer.

Gibson County (Tenn.) Medical Society.—The semi-annual meeting was held in Humboldt, June 19. Dr. John T. Faucett, Trenton, was elected president; Dr. Benjamin S. Penn, Fruitland, vice-president; Dr. Basil T. Bennett, Trenton, secretary and treasurer, and Dr. George W. Penn, Humboldt, representative to the Tennessee State Medical Association.

Worcester North District (Mass.) Medical Society.—The forty-fifth annual meeting was held in Worcester April 28. Dr. H. Porter Hall, Leominster, was elected president; Dr. Edward A. Sawyer, Gardner, vice-president; Dr. Walter S. Sawyer, Fitchburg, secretary; Dr. Eustace L. Fiske, Fitchburg, treasurer, and Dr. Luther G. Chandler, Townsend, commissioner of trials.

Medical Society of the State of North Carolina.—To complete the report which appeared in THE JOURNAL of June 20, the election of Drs. John H. Williams, Asheville; John C. Rodman, Washington, and S. Fred Pfohl, Winston, as vice-presidents, and of Drs. J. Howell Way, Waynesville, and Albert Anderson, Wilson, as members of the House of Delegates, must be noted. In 1904 the society will meet in Raleigh, on June 1.

Southern California Medical Society.—The thirty-first semi-annual meeting was held in Avalon, Santa Catalina Island, June 3 and 4. The following officers were elected: President, Dr. John C. King, Banning; vice-presidents, Drs. Frank Garcelon, Pomona, and Luther M. Powers, Los Angeles, and secretary and treasurer, Dr. Frank D. Bullard, Los Angeles. The next meeting will be held at Redlands in December.

North Missouri Medical Association.—At the annual meeting held in Columbia, June 19, the following officers were elected: President, Dr. W. V. Yates, Callao; vice-presidents, Drs. Edwin S. Cave, Mexico, and A. N. Wood, Sumner; corresponding secretary, Dr. William O. Hawkinson, Roanoke; recording secretary, Dr. J. H. P. Baker, Salisbury, and treasurer, Dr. Robert Haley, Brookfield, (re-elected). Kirksville was selected as the place for the next meeting.

Norwich (Conn.) Medical Association.—On May 18 this association celebrated its twenty-fifth anniversary. The exercises consisted of an address of welcome by the president, Dr. Patrick Cassidy; a historical sketch of the society by the secretary, Dr. Rush W. Kimball, and an address by Dr. W. Gilman Thompson, New York City, on "The Clinical Value of Recent Laboratory Tests." About 50 physicians of Eastern Connecticut were present at the banquet which followed.

Wayne County (N. Y.) Medical Association.—At the annual meeting held in Lyons, June 2, Dr. James W. Putnam, Lyons, was elected president; Dr. Mary A. Brownell, Newark, vice-pres-

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ident; Dr. George S. Allen, Clyde, secretary, and Dr. Darwin Colvin, Clyde, treasurer. Drs. Jennie M. Turner, Lyons, Lucius H. Smith, Palmyra, and John T. Myers, Sodus, were added to the executive committee, and Dr. Thomas H. Hallett, Clyde, was made a member of the nominating committee, Fourth District Branch.

Congress of Dermatology.—Unusual inducements are offered to members of this congress, which will meet at Sarajevo, Bosnia, September 21 to 23. The Bosnian government has offered a free special train from the borders of Bosnia to Sarajevo, and for several excursions to other points. Very moderate stipulated charges in the hotels are also promised. By invitation of the Hungarian confrères at Budapest, the members are to spend a day there on their way to the congress. Dr. L. Glück of Sarajevo is at the head of the executive committee of the congress.

Association of Medical Officers of the Army and Navy of the Confederacy.—The sixth annual meeting was held in New Orleans, May 19, 20, 21 and 22. The election of officers resulted as follows: Dr. Stanford E. Chaille, New Orleans, who, on account of age and infirmity declined, whereupon Dr. John R. Gildersleeve, Tazewell, Va., was elected; Drs. James D. Croom, Maxton, N. C., William E. Brickell, New Orleans, F. R. Calhoun, Cartersville, Ga., and James M. Holloway, Louisville, Ky., vice-presidents, and Dr. Deering J. Roberts, Nashville, Tenn., secretary and treasurer (re-elected).

Naturforscher Congress.—The seventy-fifth annual congress of the German Association of Physicians and Naturalists will be held this year at Cassel, convening September 21 to 26. The Berlin professor of chemistry, van t'Hoff, will preside. The addresses at the two general meetings will be by Behring on "Tuberculosis," Griesbach on "School Hygiene," Ramsay, London, on the "Periodical System of the Elements" and by Ziehen, Utrecht, on the "Physiologic Psychology of Sentiments and Sensations." Radiotherapy will be the chief theme in the medical section, with addresses by Jensen and Rieder. These congresses are always attended by thousands and have been important landmarks in the history of science in Germany. The aim is to bring together theory and practice, the laboratory worker and the general practitioner, with scientific workers of all kinds. Penck, Vienna, will deliver an address on "Geologic Time"; Schwalbe on the "Prehistoric History of Man," and Alsberg on "Hereditary Degeneration in consequence of Social Influences."

Medical Society of Delaware.—The one hundred and fourteenth annual meeting was held in Dover June 9. Dr. George W. Marshall, Milford, made a report of the meeting of the American Medical Association, to which he was a delegate. The following officers were elected: Dr. Harry G. M. Kollock, Newark, president; Drs. Paris T. Carlisle, Frederica, and Laurence M. Cahall, Bridgeville, vice-presidents; Dr. John Palmer, Jr., Wilmington, secretary; Dr. Joseph M. Martin, Lewes, assistant secretary; Dr. William C. Pierce, Wilmington, treasurer; Drs. Henry J. Stubbs, Wilmington, Joseph R. Smith, Cheswold, and David Hall, Lewes, councilors; Dr. George W. Marshall, Milford, delegate to the American Medical Association, and Dr. Willard Springer, Wilmington, alternate. It was decided to submit to the governor the following names from which to select members of the State Board of Medical Examiners: Drs. Ezekiel W. Cooper, Camden; Francis L. Springer, Newport; Henry W. Briggs, Wilmington; L. August H. Bishop, Dover; Robert G. Ellegood, Concord; William T. Skinner, Glasgow; Charles Green, Greeneville; John Palmer, Jr., Wilmington; Oliver D. Robinson, Georgetown, and David Hall, Lewes. Resolutions were adopted favoring legislation looking to the examination of the eyes and ears of school children. The society adjourned, to meet at Lewes, June 14, 1904.

MASSACHUSETTS MEDICAL SOCIETY

One Hundred and Twenty-second Annual Meeting, held in Boston, June 9 and 10, 1903.

The President, Dr. George E. Francis, Worcester, in the Chair.

First Day.

The morning of the first day was devoted to visiting hospitals and dispensaries. At 2 p. m. the society met in two sections at the Medical Library on the Fenway.

Examination of Stomach Contents.

DR. ELLIOTT P. JOSLIN, Boston, speaking on "Inferences to Be Drawn from the Examination of the Contents of the Stomach," explained how simple are the tests necessary for such examination of the fluid obtained by the stomach tube from the fasting stomach, and pointed out the great aid thereby gained for diagnosis and treatment. His paper was ably discussed by Dr. R. H. Chase.

Dietetic Treatment of Constipation.

DR. HENRY F. HEWES, Boston, maintained that nearly every case of constipation can be controlled by adding to the diet suitable quantities of cereals, fats, vegetables, fruits or fermenting carbohydrates, using only as a last resort senna in stewed prunes.

Surgical Treatment of Gastric Ulcer.

DR. JOHN C. MUNRO, Boston, urged the joint study of every case by the physician and surgeon. Most cases are medical, but in those cases which are not, operation should be done early. Great advances have been made in the surgery of the stomach in the last three years.

Section in Surgery.

In this section the chief papers were on "Rupture of the Quadriceps Extensor Muscle," "Surgery of the Esophagus," "Prostatectomy," and "Adeno-Carcinoma of the Intestine." These papers were much more freely discussed than those in the medical section, the meeting adjoining only when it was necessary for the councilors to meet.

Councilors.

About 100 members of this representative body met to transact the necessary annual business of the society. The secretary reported the addition of 173 new members during the past year and the death of 42. The treasurer reported a balance of $11,289 on hand, total disbursements of over $26,000, and permanent funds amounting to $37,494.

Arrangements for 1904.

It was voted that the next meeting be held on the second Wednesday in June, 1904, in Boston. The Shattuck Lecture for 1904 will be given by Dr. Juan Guiteras. Dr. Harold C. Ernst, Boston, was elected orator for next year. The officers were re-elected with the exception of vice-president, for which office Dr. J. F. Alleyne Adams, Pittsfield, was chosen.

Shattuck Lecture.

The Shattuck Lecture was given in the John Ware Hall in the Medical Library by Dr. Theobold Smith, Boston, on "The Sources, Favoring Conditions and Prophylaxis of Malaria in Temperate Climates, with Special Reference to Massachusetts." It was a most exhaustive paper, the result of eight or ten years' study of the subject, and was illustrated by lantern views. Considerable portions were omitted in the reading. The author believes that "there is no evidence, experimental or otherwise, that the malaria germs exist outside of their hosts, man and the mosquito." He endeavored to explain immunity, and dwelt on the latent character of the disease, maintaining that infected human beings must be the starting point for any epidemic. Early malaria came from the Indians. Later we have derived it from Italian, Hungarian and negro laborers.

Tobacco and the Heart.

DR. RALPH C. LARRABEE, Boston, said the action of the heart is reduced by even moderate amounts of nicotin, the effect being noticed very quickly. Tobacco smoke contains, he said, from nothing to 50 per cent. of nicotin. Allowing that smoking must prevail, he would advise smokers to use long-stemmed pipes and to keep them clean, and not to smoke cigars too close to the end. No harm will result, he said, from suddenly and completely ceasing the smoking habit.

Posture in Gynecology.

DR. DANIEL H. CRAIG, Boston, demonstrated that the abdominal pressure induced by coughing, sneezing and straining in women suffering from pulmonary disease probably has a large influence in determining displacements of the pelvic viscera, notably the ovary and uterus.

Anatomy Not an Exact Science.

DR. THOMAS DWIGHT, Boston, presented a paper on "Problems of Clinical Anatomy," in which he effectively disposed of

the idea that anatomy is a completed exact science. He showed by large models what wide variations may exist in skull, vertebræ, aorta and tarsal bones, and explained how surgeons, not knowing of these frequent variations, are misled by *x*-ray photographs.

Privileged Communications.

DR. DAVID W. CHEEVER, the "Nestor" of Boston physicians, was greeted with much applause when he came forward to make "A Plea for a Change in the Massachusetts Law in Regard to Privileged Communications." He maintained that the adage of Hippocrates, "Nothing heard in the sick-room shou'd ever be heard outside of it," should be put in practice legally, unless, 1, the patient consented; 2, it was necessary for the doctor's self-defense, or 3, it was necessary to expose crime. All New England and nearly half the states of the Union are following the English law, which obliges the physician to disclose in the courts of justice such information as may have been acquired in a professional capacity, even if it involves the character of the patient's family or disgraces the memory of the dead. New York and about one-half of the states in the Union have adopted the Roman law, which not only exempts the physician, but forbids him from disclosing such information. He pleaded for a change in the Massachusetts laws bearing on this subject, and he suggested that if confidential communication must be disclosed as an aid to justice it should be communicated to the judge in private.

WALTER SOREN, ESQ., Brookline, showed "The Workings of the New York Law," which was devised to protect the patient, and quoted a large number of cases and decisions by the New York courts as determining three points: 1, when the relations of physician to patient become "professional"; 2, what information obtained during this professional relation is excluded, and 3, what information is necessary to the physician to enable him to act.

Tuberculosis.

DR. HERBERT L. BURRELL, Boston, delivered the annual address on "Tuberculosis" and illustrated by numerous lantern views. He said:

> The line along which we should work is that of giving the patient greater resistance to the disease. This can be done especially through the use of sanatoriums and other special methods of treatment, including all forms of outdoor treatment. These methods were widely adopted in Germany, where the sanatoriums were supported from the reserve of $175,000,000 fund accumulated as a result of the Bismarck laws regarding insurance of working people. In Germany, moreover, an amount of attention had been given to tuberculosis by the insurance companies that might well be imitated here. There is now a drift of opinion toward the view that change of climate is not so important as other methods of dealing with the disease. Hospitals, with few exceptions, recognize the necessity of outdoor treatment. Sometimes, as in Germany, the patients are kept out of doors all night. Yet, thus far, outdoor life for consumptives is not adequately recognized. There are two errors which continue to be associated with the outdoor treatment—the sending of patients to sanatoriums when they are in an advanced stage of the disease, and failure fully to recognize in the treatment of consumptives the physiologic value of rest.

He urged physiologic rest for the affected organ or part, whether treated medically or surgically, and pointed out the great benefits to be obtained from sunshine, air, diet and care in sanatoria.

Entertainment.

The festivities of the meeting which began in the Cutting lunch, served immediately after the councilors' meeting, repeated in the evening at the reception to the officers, ended at 1 p. m., Wednesday, in the annual dinner served in Symphony Hall, where over 1,200 physicians dined together. After-dinner toasts were responded to by Attorney-General Parker, Rev. M. H. Hall and others.

BUFFALO ACADEMY OF MEDICINE.

Regular Meeting, held May 20, 1903.

Dr. Herman E. Hayd, Chairman, presiding.

Early Diagnosis of Gastric Cancer.

PROF. C. A. EWALD, Berlin, delivered an address on this subject. Since the great strides made in recent years in the domain of abdominal surgery the question of an early diagnosis by the internist of gastric carcinoma has become an important one, for if the case can be correctly diagnosed sufficiently early before metastases have occurred the surgeon may radically remove the growth and the case may result in recovery.

There are cases which show one or all of the following symptoms: 1, A tumor; 2, swelling of nodes, axillary, inguinal, etc.; 3, cachexia, and 4, changes in secretion. These cases are not difficult of diagnosis, but when diagnosed it is too late for radical operation.

Early Symptoms.

The question of early symptoms should be considered when the tumor is not far advanced, when no metastases exist and where there is a possibility of the removal of the growth in its entirety.

The school of Kaussmaul and von den Velden wanted to prove that wherever free HCl was diminished or absent it was sufficient to diagnose cancer of the stomach, but Ewald demonstrated many cases where, although there was an absence or diminution or free hydrochloric acid secretion, they were not cancer, as, for example, neuroses, achylia gastrica, etc.

Boas stated that the presence of lactic acid was an important symptom for cancer. This also has been proven a mistaken belief, for lactic acid depends on one or all of three conditions: 1, No hydrochloric acid secretions; 2, stagnation of gastric contents, and 3, no peptic enzymes. When these three conditions present themselves lactic acid is formed, and it may exist in cases other than cancer. A case of cancer of the gall bladder with pyloric obstruction due to pressure and secondary dilatation of the stomach was cited where lactic acid was present, and where no cancerous infiltration of the stomach could be detected on postmortem examination. The same conditions which apply to the value of lactic acid apply also to the thread-like Oppler-Boas bacilli, which are a lactic-acid forming bacilli.

Gastric Ulcer and Cancer.

Rokitansky and other pathologists showed years ago that many cases of gastric ulcer are transformed in time to carcinoma. If, then, we could detect this transformation sufficiently early an early diagnosis of gastric cancer could be made. In ulcer there is hyperchlorhydria; so soon as the metamorphosis to cancerous degeneration occurs the hydrochloric acid is diminished or disappears. Cases of chronic ulcer going on slowly and which in time give suspicious signs of cancer may be detected if the gastric contents are analyzed and alteration of secretion is noted.

A Polish physician, Gluczinski of Cracow, by making three analyses of stomach conditions: 1, The fasting stomach; 2, after the Ewald test breakfast, and 3, after a more complete meal, found that if these analyses gave the same results of hypersecretion then the ulcer still existed; if, on the other hand, there were variations, say hypochlorhydria or absence of HCl in one or two or three of the test meals, then a suspicion of a beginning cancerous degeneration existed. Gluczinski operated on one case in which after these test meals a suspicion of cancer was diagnosed, and found a beginning degeneration from ulcer to cancer.

Case Report.

Ewald used this method in four cases and gives his result in one:

> CASE 1.—Man; aged 39; father had cancer of stomach. Patient has complained for several years of oppression after meals, nausea, eructation and vomiting of undigested stomach contents. He is emaciated, has lost weight. No tumor was detected and there was no glandular enlargement. He had vomited blood once. This probably came from the stomach. The stomach was dilated and there was succussion. Tests were made after Gluczinski. Acidity, 60; mucus and slow digestion of mucus. The fasting stomach showed mucus and no acidity; Ewald's acidity, 72; free hydrochloric acid, 50. After a full meal acidity, 28; no free HCl, but combined HCl.
>
> As a result of these examinations and the history, the case was diagnosed as early carcinoma of pylorus. The operation of pyloric resection and gastroenteric anastomosis was performed by Professor Krause. The patient made a complete recovery. Macroscopic and microscopic examination of the pyloric sclerosed tissue failed to reveal carcinoma. The case was a hypertrophic enlargement of muscles of pylorus which often follows gastric ulcer, so in this case the method described by Gluczinski failed.

Tryptophan Test.

A new method has lately been described by Dr. Glässner, assistant to Ewald. It is called the tryptophan reaction. Into

a small vessel containing 10 to 20 c.c. of filtered stomach contents containing free hydrochloric acid, place a small piece of carcinomatous tissue. A glass tube filled with albumin is then placed into this vessel. After a time—about 24 hours—both ends of the albumin tube will show a digestion of the albumin. If the solution is then filtered and a solution of bromin is added, a red coloration will show the tryptophan reaction. If the tissue added is cancerous, this reaction follows, if not, no reaction takes place.

As yet the number of cases in which this test has been made are not large enough to make positive statements as to its value.

Must Rely on Old Methods.

Professor Ewald believes that we still have to rely on other methods for our diagnosis, for after all we must fall back to the detection of the tumor for diagnosis, so that he who is well trained to examine the abdomen by palpation, percussion, etc., will be better able to detect a growth earlier than he who does not practice this form of examination. He recommends that by examining a patient in a warm bath the muscular rigidity may be overcome and more satisfactory results obtained in detecting a growth. He also often uses an ether spray in a circumscribed area over the region of the tumor to relax the muscles.

Epochs of American Medicine.

In conclusion Professor Ewald spoke in laudatory terms of the American institutions which he had visited. He spoke of these epochs of American medicine: 1. When instruction was sought in England; 2, when American physicians visited the French masters, and 3, the present or German epoch. He predicted that in the near future, with the great advances in the medical art in America, the tide would turn and that continental students would seek American institutions and medical education.

Luncheon for Professor Ewald.

Following the address Dr. A. L. Benedict gave a luncheon for the members in honor of Professor Ewald.

NEW YORK STATE MEDICAL ASSOCIATION.

Nineteenth Annual Meeting of the Fourth District Branch, held at Buffalo, N. Y., June 16, 1903.

The President, Dr. J. William Morris, Jamestown, in the Chair.

President's Address.

The president made a brief report of the work which had been done in the past year. At the last annual meeting only three counties—Erie, Chautauqua and Steuben—were represented. This year ten counties were represented by delegates. Last year the membership was 176; at this meeting it was 336. There are still four counties in the district—Ontario, Yates, Livingston and Niagara—which are unrepresented, but he expressed the hope that delegates from these counties would be present at the next meeting.

Election of Officers.

The following officers were re-elected: President, Dr. J. William Morris, Jamestown; vice-president, Dr. Bernard Cohen, Buffalo, and secretary, Dr. William J. Thornton, Buffalo. Dr. Henry A. Eastman, Jamestown, was elected treasurer. Drs. Alvin A. Hubbell, Buffalo, and George L. Preston, Canisteo, were elected delegates to the state association. The following were elected members of the executive committee: Drs. George H. Witter, Allegany County; William H. Vincent, Cattaraugus County; Orrin T. Shaw, Chautauqua County; Allen A. Jones, Erie County; Albert P. Jackson, Genesee County; Thomas A. O'Hare, Monroe County; Edward Munson, Orleans County; Charles O. Green, Steuben County; James W. Putnam, Wayne County, and Philip S. Goodwin, Wyoming County. The committee on arrangements for service for the ensuing year is made up as follows: Drs. J. William Morris, Jamestown; Allen A. Jones, Alvin A. Hubbell, George A. Himmelsbach, William I. Thornton, Bernard Cohen Arthur G. Bennett, Grover W. Wende and William J. Thornton, Buffalo.

Significance of Uterine Retrodisplacements.

DR. SAMUEL M. BRICKNER, New York City, read a paper on "The Obstetrical Significance of Retroversion and Retroflexion of the Uterus," which was a strong argument against the retention of the dorsal posture after childbirth. He declared that too many physicians insisted on keeping their patients on their backs too long after childbirth.

DR. CARLTON C. FREDERICK, Buffalo, said that, other things being normal, he never insisted on any particular attitude in bed, so long as the patient remained in bed, but that he was opposed to keeping patients in the dorsal position.

Cancer of the Lungs.

DR. JOHN HERR MUSSER, Philadelphia, President-elect of the American Medical Association, delivered the principal address of the afternoon, which dealt with the most recent conclusions and discoveries in relation to malignant disease of the lungs, and reported three cases of cancer of the lungs which had come under his observation, one of which bore a close similarity in its symptoms to tuberculosis. Dr. Frederick Holme Wiggin, New York City, president of the New York State Medical Association, accompanied Dr. Musser to Buffalo and participated in the discussion which followed his address.

Banquet.

A dinner was given at the Iroquois in the evening in honor of Dr. John Herr Musser of Philadelphia, President-elect of the American Medical Association, and Dr. Frederick Holme Wiggin of New York City, president of the New York State Medical Association. Dr. Allen A. Jones, Buffalo, was toastmaster, and informal addresses were made by the presidents of the Fourth District Branch Association, the New York State Medical Association and the American Medical Association.

NEBRASKA STATE MEDICAL SOCIETY.

Thirty-fifth Annual Meeting, held at Lincoln, April 28 to 30, 1903.

The President, Dr. Allen B. Anderson, Pawnee City, in the Chair.

Welcome.

Rev. H. C. Swearingen, Lincoln, welcomed the society on behalf of the city, and Dr. Robert C. McDonald, Fremont, responded for the society, thanking the citizens for the cordiality and sincerity of their welcome.

Reorganization.

The Committee on Reorganization recommended, by its chairman Dr. Alexander S. Von Mansfield, Ashland, adoption by the society of the constitution and by-laws suggested by the American Medical Association. Fifty-nine counties of a possible sixty-five made the necessary organization in anticipation of the reorganization. The state is divided into twelve councilor districts, containing the following counties:

No. 1.—Douglas and Sarpy.
No. 2.—Lancaster, Cass and Otoe.
No. 3.—Gage, Johnson, Nemaha, Pawnee and Richardson.
No. 4.—Knox, Cedar, Dixon, Dakota, Antelope, Pierce, Wayne, Thurston, Madison, Stanton and Cuming.
No. 5.—Burt, Washington, Dodge, Colfax, Platte, Boone, Nance and Merrick.
No. 6.—Saunders, Butler, Seward, Polk, York and Hamilton.
No. 7.—Clay, Fillmore, Saline, Nuckolls, Thayer and Jefferson.
No. 8.—Cherry, Keya Paha, Boyd, Brown, Rock, Holt, Grant, Hooker, Thomas, Blaine, Loup, Garfield and Wheeler.
No. 9.—Custer, Valley, Greely, Sherman, Howard, Dawson, Buffalo and Hall.
No. 10.—Gosper, Phelps, Adams, Furnas, Harlan, Franklin and Webster.
No. 11.—Red Willow, Hitchcock, Dundy, Chase, Hayes, Frontier, Lincoln, Perkins, Kieth, Arthur, McPherson and Logan.
No. 12.—Deuel, Sheridan, Dawes, Box Butte, Sioux, Scottsbluff, Banner, Kimball and Cheyenne.

The report of the committee and the new constitution and by-laws were adopted.

A scientific program of the usual number of papers was read and discussed. The society more than doubled its membership and the attendance was larger than any previous meeting.

Election of Officers.

Officers for the ensuing year were elected as follows: President, Dr. Benjamin F. Crummer, Omaha; vice-presidents, Drs. G. W. Shidler, York, and P. Emmett Plumb, Gothenburg; secre-

tary, Dr. A. D. Wilkinson, Lincoln (re-elected); corresponding secretary, Dr. H. Winnett Orr, Lincoln (re-elected); treasurer, Dr. James L. Greene, Asylum (re-elected); and councilors: First district—Dr. Byron B. Davis, Omaha; second district—Dr. Albert R. Mitchell, Lincoln; third district—Dr. John W. Bullard, Pawnee City, and fourth district—Dr. Edward Tanner, Battle Creek. The other eight councilors hold over. Omaha was selected as the place of the meeting for 1904.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held May 5, 1903.

The President, Dr. Wm. Egbert Robertson, in the Chair.

Treatment of Tapeworm.

DR. SAMUEL P. GERHARD read a paper in which he called attention to the three specimens which were most commonly met, i. e., the beef tapeworm or *Tænia saginata*, the pork tapeworm or *Tænia solium*, and the broad tapeworm or *Bothriocephalus*, the former being the one most commonly met in this country. He called attention to the necessity of thoroughly cooking the meat before it is eaten, which, together with cleanliness on the part of those engaged in handling it, and systematic and regular inspection of the cattle and the meat after it is in the market, he believed would materially decrease the number of cases of this condition. He remarked on the difficulty in removing the worm and considered that the treatment which was applicable to worms of one character was applicable to all. The preparation of the patient prior to the administration of the remedy he considered a most important factor; the patient should be required to fast for twenty-four hours before the medicine is administered, during which time the bowels should be thoroughly emptied by means of purgatives. Among the drugs mentioned were the male fern, the bark of the pomegranate, and its alkaloid, pelletierin; the last two, however, are very impalatable and may produce toxic effects in doses large enough to be effective. Oil of turpentine, while formerly used to a great extent, owing to its nauseating taste and difficulty of administration, has somewhat fallen into disuse. Kamal is a very active drug, but its use is contraindicated, because it causes nausea and vomiting in many instances. Powdered pumpkin seeds were thought to be a valuable and harmless remedy, especially in children. He emphasized particularly the importance of removing the whole worm in all cases, for if the head or any of the segments remain it will develop again in from six to eight weeks. He believed that the great drawback to the administration of many of the remedies was the very large dose required, being in some instances as much as a pint of a bitter nauseating liquid, to be taken at one or two draughts, necessitating loss of time, and being a very serious matter with a weak and debilitated patient.

He reported a method which he had found very satisfactory. The patient is instructed to thoroughly clean out the bowels by purgatives the day previous to the administration of the remedy. In the morning, as early as possible, a twenty-grain capsule of pelletierin tannate is given, and after this has operated fully, which is usually in about two or three hours, the following prescription is administered:

℞. Olei resinæ aspidii
Etheris, ää ..... ʒii
Hydrargyri chloridi mitis ..... gr. xii

This is divided into sixteen capsules and one given every ten minutes, no food being taken. In about two or three hours the worm will be expelled whole, with its head intact. He stated that he had recently employed this method in seven cases, with very satisfactory results; the depression is generally very slight and does not last longer than two or three hours, and if it does exist light food can be administered after the worm is expelled.

DR. L. NAPOLEON BOSTON gave a microscopic exhibition of intestinal parasites, consisting of the beef worm, trichina, echinococcus and ankylostoma.

DISCUSSION.

DR. A. C. MORGAN stated that he had used the remedies recommended with very satisfactory results. He believed that a positive diagnosis of tapeworm should not be made unless the segments were found in the stool, although the larvæ are not discoverable there. He referred to the predisposition of the embryo of various worms to lodge in the pectoral muscles, the biceps, the diaphragm and particularly under the tongue, and in a patient suffering from what is apparently muscular rheumatism, but in reality larvæ, there will be irregular temperature, some fever and increased pulse. Interference with the action of the diaphragm, tenderness of the various muscles and symptoms of pleurisy are also important diagnostic symptoms. He believed that the oil of turpentine was contraindicated, if the kidneys were not in perfect working order.

DR. SAMUEL WOLFE referred to the difficulty of diagnosis of this condition, as the various forms of intestinal parasites do not give rise to particular symptoms, and the conclusion can probably only be positively reached after seeing a worm, and the condition may exist for a considerable time without any being passed. He felt that they were more apt to occur during some acute infectious disease, or some decided constitutional disturbance, especially when the disease has assumed the malignant form, he having observed in several instances during the infection that worms were passed in very large numbers. In cases of tapeworm, he believed, if the worm was of any size, segments would usually be discoverable in the stools.

DR. LUTHER C. PETER attributed poisonous effects to the castor oil which was administered in most cases.

DR. GIBBON reported the case of a child who, during the three or four months previous to the passing of segments, had been given raw Hamburg steak. He also referred to a case which had come under his observation in the Children's Hospital, where a child was seized with coughing and the nurse removed one or two large worms from its mouth. He believed that the migration of the worms was particularly common in typhoid fever, in some cases causing the perforation.

DR. HARRY LOWENBURG reported the case of a Polish child who was brought to him a short time ago suffering from hematemesis. Being familiar with the fact that these people fed their children on raw pork, he at once administered an emetic, which was followed by the vomiting of a large round worm, about four inches long, after which all the symptoms disappeared.

DR. CHARLOTT reported the case of a girl operated on in the German Hospital, after which she vomited a large number of worms.

DR. ARTHUR P. HITCHENS suggested the possibility of the remedy being absorbed before it reached the intestinal tract unless it was given in capsule form, which method he believed would be the most efficient.

DR. WM. EGBERT ROBERTSON recommended the more frequent examination of the stools, which he believed would lead to the detection of the ova of the round worm in many instances. While the flat worm is rare in children, he referred to a case reported by Dr. D. J. Milton Miller, occurring in a child eight months old, who was supposed to be infected by feeding it on expressed beef juice.

DR. L. NAPOLEON BOSTON stated that in cases of trichina there is always a swelling and pain in the frontal region. He believed that the *Oxyuris vermicularis* was quite as common in adults as in children, and while the habits of the patient may have had a great deal to do with its occurrence, he did not feel that the social class had. Examination of the rectal mucus prior to the commencement of treatment was recommended in all cases.

DR. SAMUEL P. GERHARD believed that many cases were diagnosed as *Tænia solium*, which in reality were worms of a different character. He believed that the reason this condition was not so prevalent in this country was due to the fact that people had been taught to cook pork thoroughly, while they eat raw beef, which accounts for the more frequent occurrence of that variety. Ether he believed to be of value, as it tended to stupify the worm, and in that way facilitate its removal, and he also felt that it was important that the worm should be passed into a vessel of warm water, for if the temperature is lower than that of the intestinal tract it is liable to recede.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

The Nitrites and Nitroglycerin.

There are probably no preparations which more certainly produce positive results when administered than do amyl nitrite and nitroglycerin. The physiologic action of these preparations is similar, such as producing fulness in the head, flushing of the face, a general dilatation of the peripheral vessels and acceleration of the pulse and respiration. As a result of this arterial dilatation the blood pressure is lowered.

These preparations are of great value in the treatment of angina pectoris to relieve the arterial spasm either by inhaling the amyl nitrite dispensed in pearls or by the internal administration of nitroglycerin. The latter preparation is of service in relieving the labor of the heart, which has already undergone great changes in chronic interstitial nephritis. Under such circumstances the marked arterial tension so characteristic of this disease is greatly lowered and the labor of the left heart decreased. Nitroglycerin is also of service in some cases of pneumonia where digitalis is indicated, in order to counteract the effects of the latter preparations on the peripheral circulation. In other words, it should be remembered that the nitrites are only indirect heart stimulants owing to the fact that they decrease the labor of the heart by lessening the resistance in the arterial rather than by stimulating the heart muscle, as does digitalis. So that in those conditions accompanied by high aortic resistance they can be employed to advantage.

In asthmatic attacks accompanied by spasm of the bronchioles relief is promptly given by the nitrites.

In cerebral hemorrhage it is supposed to decrease the tendency to greater hemorrhage by so dilating the visceral blood vessels as to decrease the blood pressure in the cerebral circulation. In cirrhotic kidney the following combination was a favorite of Da Costa:

℞	Nitroglycerini .....gr. 1/100	0006
	Tinct. digitalis	
	Tinct. strophanthi, ää.....m. ii	12
	Tinct. belladonnæ .....m. ss	03

M. Ft. cap. No. i. Sig.: Take one such every six hours.

In asthma the following combination containing glonoin is recommended by Hare:

℞	Pot. iodidi	
	Sod. brom., ää .....gr. iii	20
	Nitroglycerini .....gr. 1/150	00045
	Tinct. lobeliæ .....m. ii	12

M. Ft. tabella No. i. Sig.: One such four or five times a day.

The following containing sodium nitrite is also of service in asthma:

℞	Chloralis hydratis .....ʒiii	12
	Sodii nitritis .....ʒss	2
	Tinct. stramonii .....ʒi	4
	Syr. glycyrrhizæ q. s. ad.....ʒii	60

M. Sig.: One teaspoonful every four hours.

The following combinations containing powdered niter is recommended to relieve asthmatic attacks:

℞	Stramonii flores.....ʒii	8
	Cannabis Ind. flor.....ʒiss	6
	Pulv. niter .....ʒiss	45
	Olei eucalyptus .....ʒss	2

M. Ft. pulvis. Sig.: Place one teaspoonful in a saucer and burn in the patient's room; or:

℞	Stramonii flores. .....ʒi	30
	Pulv. niter .....ʒss	15

M. Sig.: Small amount to be placed on a plate and burned.

Amyl nitrite, potassium nitrite and nitroglycerin have been used with some success in relieving the attack of epilepsy.

Chorea.

D. H. Crawford, in *Cleve. Med. and Surg. Rep.*, recommends, in the treatment of chorea, that the child be taken from school and be protected from all exciting influences that would aggravate the functional derangement of the nervous system. Mild exercise is beneficial and plenty of fresh air. In the graver cases the patient should be put to bed and placed on a good nutritious diet. He recommends cod-liver oil, milk, eggs and vegetables. Meat should be prohibited. Massage is of service in chronic cases. The author states he has derived the best results, in a medicinal way, from agaracin.

However, he has used with advantage, arsenic, stramonium, hyoscyamus and belladonna. The latter preparation is indicated where there are conditions of great mental excitement, and in the delirium approaching a maniacal state.

Bjorkman, in *Merck's Archives*, states that where rheumatic symptoms accompany the chorea and acute endocarditis is not present, excellent results may be obtained by the following:

℞	Sodii salicyl. .....ʒiiss	10
	Syr. rubi idæi.....ʒiss	50
	Aq. destil. q. s. ad.....ʒviii	240

M. Sig.: One dessertspoonful five times daily the first day; four dessertspoonfuls the second day, and three the next, etc. The foregoing dose is for a child five years of age.

Besides the administration of arsenic in the form of Fowler's solution, which the author ranks first among medicinal agents, he states that the digestive tract demands especial attention. Purgatives should be used freely, either castor oil or salines. As an intestinal antiseptic salol is recommended in 2 to 5 grain (.12-.30) doses.

Iron is of value combined with arsenic as follows:

℞	Liq. potassii arsenitis .....ʒi	4
	Syr. ferri iodidi .....ʒi	30

M. Sig.: Ten to thirty drops in water three times a day, gradually increasing the dose; or:

℞	Tinct. ferri chloridi .....ʒvi	24
	Liq. potassii arsenitis .....m. lxxx	5

	30

M. Sig.: Twelve to twenty drops after meals, well diluted.

Hammond recommends the bromid of zinc as follows:

℞	Zinci bromidi .....ʒi	4
	Syr. simplicis .....ʒi	30

M. Sig.: Ten drops three times a day, increased as rapidly as the stomach can bear it.

Following combination has been employed with good results:

℞	Zinci valerianatis	
	Ext. hyoscyami	
	Bismuthi subnit., ää.....gr. xv	1

M. Ft. cap. No. xxv. Sig.: Three to six capsules daily.

Or a combination of arsenic and chloral as follows:

℞	Liq. pot. arsenitis .....m. iii	20
	Chloralis hydratis .....gr. v	30
	Aq. menth. pip. q. s. ad.....ʒi	4

M. Sig.: At one dose, to be repeated after each meal.

Medicolegal.

Privilege in Suicide Case and When No Doctor Wanted.—The New York case of Meyer vs. Supreme Lodge, Knights of Pythias, was brought to recover on a fraternal mutual benefit certificate. The defense was that the insured had committed suicide, which, by the terms of the certificate, rendered it null and void. To aid in establishing this defense, it was sought to introduce the testimony of three physicians who attended the insured, as to declarations concerning the cause of his death, made by him in their presence. One of the physicians was summoned to attend him in one of the rooms of a hotel; one was the house physician of a hospital who examined and treated him after he had been removed there; and the other was the junior surgeon of the hospital, who had assisted the house physician in the examination and treatment of the case. There was no evidence that the insured employed any one of these physicians, but, the Second Appellate Division of the Supreme Court of New York says, it was none the less true that they attended him in no other than a professional capacity. And thus was raised the question whether Sections 834 and 836 of the New York Code of Civil Procedure relate to cases where physicians professionally attend a patient who does not voluntarily require their services. Section 834 forbids any physician

"to disclose any information which he acquired in attending a patient, in a professional capacity, and which was necessary to enable him to act in that capacity." The language, the court says, is broad enough to cover cases of medical attendance, whether such attendance results from the voluntary call of the patient on a physician or from the exigencies of the patient's situation. If the relation is that of a physician attending a patient in a professional capacity, no matter how the relation was brought about, the sections apply. Section 836 provides that Section 834 applies to any examination of the physician, "unless the provisions thereof are expressly waived on the trial or examination . . . by the patient. . . . But a physician . . . may, on a trial or examination, disclose any information as to the mental or physical condition of a patient who is deceased, which he acquired in attending such patients professionally, except confidential communications and such facts as would tend to disgrace the memory of the patient, when the provisions of Section 834 have been expressly waived on such trial or examination by the personal representatives of the deceased patient." The record, the court says, showed that the party suing did not waive the privilege either on the trial or examination of any of the physicians; and even where the personal representatives waive the privilege, the physician is forbidden to disclose any fact which would tend to disgrace the memory of the patient. It could hardly be said that a declaration of the insured that he had attempted suicide would not tend to disgrace his memory. Wherefore, the court holds that there was no error in the exclusion of the testimony in question.

Dying Declarations and Privilege in Abortion Case.—The Supreme Court of Indiana says, in Seifert vs. State, that it was not disputed that dying declarations are competent in prosecutions for causing death by criminal abortions, the element of death being a substantive part of the charge. Such declarations are admitted on the ground of necessity. The necessity, however, does not depend on the stress of the particular case, but on the fact that ordinarily there is no other equally satisfactory proof of the circumstances connected with the fatal injury. Dying declarations being an exception to the rule excluding hearsay testimony, the above consideration marks, in a general way, the extent of the exception. The theory of the state in this case was that the accused furnished the deceased with a catheter, and incited her to use it to produce a criminal abortion. The court can not consent to the view that the dying declarations must be confined to the time when the deceased committed the act that resulted in an abortion, for that would leave the accused out of view entirely. The furnishing of the instrument and the inciting of the deceased to commit an abortion were as central and vital elements in the case as was the act of the deceased. In holding that declarations concerning all of these elements were proper, the court thinks that it is fully within the rule that the circumstances of the death must be the subject of the dying declaration. The statements of the deceased in her dying declarations were open to contradiction; and on the trial of the case the accused sought to contradict the portions of the dying declarations that incriminated him by the testimony of a physician as to statements that the deceased had made to him. Now, it is provided by the Indiana statute that "the following persons shall not be competent witnesses: . . . Fourth. Physicians as to matter communicated to them as such by patients in the course of their professional business or advice given in such cases." But the court thinks that, notwithstanding the broad language of the enactment, a request to a physician to commit a crime is not privileged. In this case, the matter of difficulty was the segregation of competent from incompetent evidence of the physician. If the deceased requested the physician to commit a criminal abortion on her person, as the offer to prove tended to show, that fact could have been developed, the court says, as a proper introductory fact, and that would have furnished the basis for a showing in a negative way that the proper subject on which professional advice had been sought had no relation to an abortion, and was no longer under discussion. This being shown, it would prima facie appear that the balance of the conversation was not privileged. The statute under consideration is highly beneficent in its operation, and it should not be frittered away by permitting the answering of questions which tend to reveal that which should be kept inviolate. All doubtful points must be solved against the competency of the proposed testimony, but if counsel, by a line of questions, can develop the isolated point, concerning which the court can say, this is competent, and at the same time avoid the disclosure of that which should be kept sacred, it is his privilege to pursue that course. Where, after the deceased had, in a measure, recovered from the illness occasioned by the abortion, the same physician who had performed proper professional service in an effort to relieve her from the consequences of such abortion called upon her to collect the amount of his bill, the court thinks that it would be a perversion of the statute to hold that a statement then made to him that the accused had nothing to do with her condition and would not pay a dollar was privileged.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

June 20.

1 *Sudden Death and Unexpected Death in Early Life, with Especial Reference to the So-called Thymus Death. J. P. Crozer Griffith.
2 *The Toilet of the Peritoneum in Appendicitis. G. R. Fowler.
3 *The Anatomy of the Pancreas. Eugene L. Opie.
4 Management of Malignant Disease of the Uterus. George Erety Shoemaker.
4½ Chlorosis. S. H. Rosenthal.
5 *A New Method of Treatment for Chronic Anterior Urethritis and for the Declining Stage of Acute Urethritis. William W. Townsend.
6 Man's Responsibility in Sterile Marriages. W. H. Prioleau.

1. **Sudden Death in Early Life.**—Griffith reviews the causes of sudden death which may occur in children, with special reference to the effect of the thymus in producing these accidents. It was very early observed that the thymus was often enlarged in such cases of sudden death and the mechanical theory has often been given as an explanation. The author reviews the theories, showing the difficulties of the mechanical theory, the comparatively small circulation of the gland, the fact that sudden death may occur without its enlargement, etc. As regards the possible hyperthymization of the blood or some other form of autointoxication arising from a hyperplastic gland, as suggested by Escherich, he finds no clinical evidence whatever for its support, but one fact does stand out, that there is a certain constitutional anomaly seen in some children, and even in adults, which predisposes to sudden death from trivial causes. Whether enlargement of the thymus or other lymphatic tissues is coexistent is uncertain. The disturbance depends on a state of faulty nutrition, some fault of the metabolism, attended by pathologic disturbance of the nervous centers, causing extreme irritability, involving the nervous supply of the heart and respiration. The final sudden exitus appears, however, not to be due to spasm of the larynx, though it may appear to be so, but to a sudden cardiac paralysis. In the cases he gives the heart ceased to beat at the beginning of the attack. There may be, however, a central involvement of respiration occurring and ending fatally. Other causes of sudden death are convulsions, hyperpyrexia in various diseases, congenital syphilis, rupture of caseous glands or abscesses and various malformations.

2. See abstract in THE JOURNAL, xl, p. 1594.

3. **The Pancreas.**—Opie describes the anatomy of the pancreas and its anomalies. He explains the aberrant pancreatic glands, not by the presence of accessory embryonic structures necessarily, but, as in the case he reports, by entanglement of a lateral branch of the pancreatic duct in mesoblastic layers. It is, by longitudinal growth of the intestine, transported a variable distance from the pancreas, and a new duct forms in much the same way that pancreatic ducts are regenerated after section. He insists on two anatomic peculiarities which do not receive the attention that they deserve. One is that the organ consists of two functionally diverse elements on the

one hand, cells which supply to the intestine important digestive ferments, and on the other hand, cells having no communication with the ducts of the gland, but in intimate relation to the blood vessels. The other is that the close anatomic relation of the pancreatic duct to the common bile duct favors the transmission of morbid processes from the liver and bile passages to the pancreas.

5. **Urethritis.**—The method of treatment described by Townsend consists in the use of a perforated glass rod bent at right angles with a double canal, one running through from the proximal end to the air chamber at its distal termination and another above it backward from the latter to an outlet near the point of flexure. The distal end of the air chamber is open, excepting when it is closed by the urethral walls. A powder insufflated into the tube passes through the lower canal to the air chamber and is distributed on the urethral wall at this point. As the powder is forced into the insufflator the tube is gradually withdrawn and the mucous membrane of the urethra is consequently covered. It is readily sterilized by boiling and drying in an alcohol flame when the water has been entirely shaken out. He uses astringent and antiseptic drugs, aristol prior to applying an astringent, if there is much pus accumulation. In his experience zinc, copper and aristol have accomplished the desired effects. He uses three or four treatments a week. He recommends this method in chronic anterior urethritis and the declining stages of the acute disorder, but never in the early stages of the condition.

Medical Record, New York.

June 20.

7 *Infantile Insanity in Its Relation to Moral Perversion and Crime. Allan McLane Hamilton.
8 *Gastric and Intestinal Crises. C. A. Ewald.
9 *Intravenous Infusion in Puerperal Septicemia. Edward Waltzfelder.
10 *The Correlation of Alcoilsm, Crime and Insanity. C. A. Drew.
11 The Medical Officer of the United States Navy. Gilbert T. McMaster.

7. **Infantile Insanity.**—Hamilton discusses the forms of insanity that occur in children, especially those with criminal tendencies, illustrating them by various examples, such as the Jesse Pomeroy case and others. He thinks an error is made in considering children's weaknesses that are not insanity as responsible crime and suffering them to be sent to penal institutions and idiot asylums when they might be properly guided and educated out of their tendencies. The hope for relief is in correctional institutions where children are not stamped as young felons, such as farms and trade schools, training ships and so on. He thinks the government regulation of newspapers and injurious publications should be brought about as they are largely influential in producing juvenile criminality.

8. **Gastric and Intestinal Crises.**—Ewald first notices the well-known gastric crises of tabes and also describes some conditions occurring independently of tabetic disease, but closely resembling those due to this cause. There may be nothing typical about the time of these attacks, or they may present a peculiar type of their own, recurring with regularity at rare intervals. There are no specific signs present pointing to a disease of the spinal cord, but neurasthenic or hysterical symptoms are usually prominent. These attacks are generally brought about by the partaking of food, and it frequently happens that the same articles of food may precipitate an attack at one time and not at another. The so-called idiopathic crises, moreover, may be influenced therapeutically, which is hardly ever the case with true tabetic crises. He points out how errors of diagnosis may lead to useless operations for lesions which do not exist. In cases due to disease of the central nervous system not much can be done; there is no way of cutting short the attack. Suggestion may have considerable influence in some cases, but reliable treatment is wanting. In grave cases he makes use of morphin. In the beginning it is possible to check the attack with small doses, but they will have to be increased later. There is danger of making morphinomaniacs. The method of Corning, recently tried by Chatelin, injecting local anesthetics into the epidural space of the spinal cord from the sacrum, seems to have some good effects. Technically the process is simple and easy. Cases of periodic vomiting due to functional neuroses, i. e., idiopathic vomiting, are much more satisfactory than those of gastric and other crises due to organic changes in the central nervous system. General tonic treatment by hygienic and dietetic measures, irrigations of the stomach with soothing or slightly astringent solutions, sedatives, such as the bromides, hyoscyamus, etc., and if vomiting is of reflex origin, painting the nasal mucous membrane with cocain are usually of value.

9. **Puerperal Septicemia.**—Two cases of puerperal septicemia treated by intravenous infusions of decinormal salt solution with good results are reported by Waitzfelder. In one case formalin infusions were first used, but after forty-eight hours another injection was required and decinormal solution was given with perfectly identical results.

10. **Alcohol in Crime and Insanity.**—Drew finds that in 154 cases admitted in two years to the Massachusetts State Asylum for Insane Criminals, 11, or 7 per cent., claimed never to have used alcohol as a beverage. Of these 11, 3 were epileptics and 2 were well-marked cases of imbecility. Ninety-six, or 62 per cent., were hard drinkers. The remaining 31 per cent. considered themselves only moderate drinkers, or were too demented to tell, or for personal reasons refused to give information. Fifty-six, or 36 per cent., acknowledged intemperate fathers, while 21, or less than 14 per cent., acknowledged intemperate mothers. In the 4,437 admissions to the other five state hospitals the cause of insanity in 14.88 per cent. was given as intemperance. These statistics, however, are not altogether reliable, as there is a great tendency to withhold facts. In the Worcester Asylum a careful investigation seemed to show that alcohol was the sufficient cause of insanity in 21 per cent. of the men and 7 per cent. of the women, and a causal factor in about 10 per cent. of the women and 32 per cent. of the men. Poverty, overwork, stress, worry, blighted hopes and consequent ill health following inebriety are not credited to alcohol in these statistics. If these so-called moral and mental causes were traced back the proportion of insanity charged to alcoholism might be much more equal between men and women.

Boston Medical and Surgical Journal.

June 18.

12 *The Need of an Institution for the Education of Nurses Independent of the Hospitals. Francis P. Denny.
13 *Hemostasis by Compression and Heat. John W. Keefe.
14 *Poliocencephalomyelitis and Allied Conditions. (Concluded.) E. W. Taylor.
15 A Case of Paget's Disease of the Nipple Treated by the X-Ray. Edith R. Meek.

12. **Trained Nurses.**—Denny pleads for the education of nurses, in part at least, outside of the hospital. The theoretical work and whatever requires study can not be accomplished on account of the pressure of duties. He would have an institution to give the preliminary course of instruction, and a single plant—the same corps of teachers, the same lecture rooms and laboratories—could provide for a number of different hospitals.

13. **Hemostasis.**—Keefe reports cases in addition to those in a former article published in the *Boston Medical and Surgical Journal* of January 8, of the use of Downes' electrothermic angiotribe, which he considers of decided practical value. No secondary hemorrhage is reported to have taken place. The most interesting case was one of resection of 14 inches of the intestine in a man, showing the ease with which the bowel can be resected. The perfect asepsis, he says, is certain to eliminate the mechanical appliances now in use for this purpose. The wide range of usefulness of this instrument renders a surgical outfit incomplete without it. The advantages claimed for the electrothermic angiotribe are: the exclusion of the ligature; hemostasis *en masse* or of isolated blood vessels; aseptic gastrectomy, gastro-enterostomy and resection of intestine; appendectomy; salpingectomy; extrusion of septic material during operation being rendered impossible; sterile occlusion of the Fallopian tube; absence of irritable and painful stumps; less tendency to post-operative adhesions; rapidity of operation; no secondary hemorrhage from slipping of ligatures, or suppurating sinuses due to ligatures; less pain subsequent to operation, and there is no puckering or

dragging on the tissues; value in removal of cancer as there can be no danger of inoculation with cancerous material during the operation, and the heat destroys the cancer cells beyond the point of application of the clamps.

14. Poliencephalomyelitis.—In the concluding instalment of his article Taylor offers the following conclusions, which he considers legitimate:

That a large group of affections of the central nervous system exists, provisionally to be regarded as inflammatory, in which may be included encephalitis, poliencephalitis, superior and inferior, polioencephalomyelitis, poliomyelitis, encephalomyelitis and, with reservations, Landry's paralysis, and possibly myasthenia gravis, and certain apparent peripheral nerve infections.

That these affections should be regarded as essentially identical, differing only in symptomatic expression.

That the evidence for this lies in the simultaneous involvement in individual cases of various portions of the nervous system, a notable example of which is given in poliencephalomyelitis.

That we should gain in our understanding of these and various other affections of the nervous system if we adopted a classification based on pathologic alterations and on etiology, wherever possible, rather than on clinical symptoms determined by anatomic subdivisions.

That, admitting a somewhat definite pathologic alteration of the nature of inflammation, as a fairly constant factor, we may assume the existence of a common exciting, probably toxic, cause.

That the nature of this cause is practically unknown, that its manifestations are not always uniform and that our final understanding of the distribution and prognosis of these affections must depend, first, on our knowledge of these exciting causes, and, second, on the nature of individual susceptibility and resistance.

Medical News, New York.

June 20.

16 *The Need of Public Toilets in American Cities. Edward H. Williams.
17 *The Morbid Anatomy and Pathology of Tabes. (Continued.) Joseph Collins.
18 The Proper Recognition of Electrotherapeutics. A. R. Rainear.
19 *A Contribution to the Pathology and Prognosis of the Diseases of the Bladder. Robert Holmes Greene and Harlow Brooks.
20 Impressions of the Non-heredity of Acquired Characters. A Rejoinder. Lawrence Irwell.

16. Public Toilets.—Williams pleads for the establishment in American cities of public conveniences such as exist in London, Paris and elsewhere and illustrates his article with pictures of such as are in use abroad.

17. Tabes.—The pathology of tabes is discussed at length by Collins, who thinks that evidence tends to show that the essential lesion is in the elective progressive degeneration, segmentary in type (in contradistinction to Wallerian), of the posterior columns of the spinal cord. The distribution of the degeneration corresponds with the intraspinal distribution of the posterior root-fibers. After the degenerative process has existed for an indefinite time in the cord, the endogenous fibers of the posterior columns are involved. This changes the anatomic picture and the confines of the pathologic process. In most cases of tabes of long duration pathologic alterations have been found in other portions of the nervous system. He would therefore adopt the theory of Marie and Guillain and hold that the lesions of tabes are the results of the activity of a poison, generated by syphilis, acting primarily on the intramedullary distribution of the posterior roots.

19. Diseases of the Bladder.—The following are the conclusions of Greene and Brooks' article:

1. The most frequent cause of diseases of the bladder is: (*a*) Lesions of the central nervous system, causing dilation, (*b*) septic processes of various varieties, (*c*) hypertrophy of the prostate.

2. In all conditions in which the spinal cord or central nervous system is involved, frequent and early catheterizations should be resorted to, to prevent the bad effects of overdistention or the possibility of cystic rupture.

3. Conditions of the bladder must greatly modify the prognosis in operative procedures for the relief of obstructions of the urinary flow, therefore the importance of cystoscopic and other examinations can not be too strongly insisted on.

4. Hypertrophy of the bladder wall is due to four different processes, separate or combined: (*a*) Inflammatory infiltration, (*b*) increase of the fibrous connected tissue, (*c*) smooth muscle hyperplasia, (*d*) infiltration by new growth. The clinical symptoms in hypertrophy of the bladder depend on which of these factors predominate.

New York Medical Journal and Philadelphia Medical Journal.

June 20.

21 *A Scalp-face. A New Plastic Operation. N. Senn.
22 *Whooping Cough. A New Method of Treatment. Theron W. Kilmer.
23 The Use of the X-Ray in the Exact Localization of a Foreign Body. L. D. Weiss.
24 Treatment of the Common Clinical Forms of Gonorrhea in the Female. R. Oliver Kevin.
25 Pertussis with Unusual Cerebral Symptoms. Edwin E. Graham.

21. A New Plastic Operation.—Senn describes the manufacture of a face in a case where a large portion of the normal face had been eaten away by a caustic application. It was made by the transfer of about one-half the scalp down over the face and the results were an improvement. Thirteen different operations were required to complete the work.

22. Whooping Cough.—In the treatment of whooping cough, Kilmer recommends the wearing of an elastic belt over the abdomen or thorax, or both, as the case may be, to control the tendency to vomiting, combined with the alternate use of antipyrin with the bromids and quinin, as recommended by Kerley. He holds that whooping cough is a self-limited disease and runs its course in the same way as pneumonia, but that these methods are palliative and curative as far as any methods that have been employed.

Cincinnati Lancet-Clinic.

June 20.

26 President's Address, Ohio State Medical Association. W. C. Chapman.
27 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.
28 Post-Nasal Catarrh. F. W. Davis.
29 Differential Diagnosis of Appendicitis. H. G. Marxmiller.

St. Louis Medical Review.

June 13.

30 Home and Sanatorium Treatment of Tuberculosis. William Porter.
31 Prevention of Tuberculosis. George Homan.
32 Prevention of Tuberculosis. Carl Fisch.

Annals of Gynecology and Pediatry, Boston.

June.

33 Neuroses Dependent on Prolapse of the Kidney. Augustin H. Goelet.
34 *Puerperal Eclampsia. A Plea for Treatment with Veratrum Viride. J. S. Hammond.
35 Contribution to Renal Pathology and Etiology. Henry Jacobson.

34. Eclampsia.—Hammond advocates veratrum as a drug *par excellence* in puerperal eclampsia, both on account of its action on the circulation and arterial tension and as a spinal depressant agent and obtunder of the nervous centers generally. The emesis it provokes helps in elimination and excites the excretion of bile. It also eliminates by diaphoresis. It is not contraindicated in any form of kidney disease, and it is much safer than chloral, which is not eliminative. He holds that it has not been given a fair trial by obstetricians. It should be given in doses to reduce the pulse to sixty or below and hold it there.

Medical Herald, St. Joseph, Mo.

June.

36 *Hereditary Syphilis. Richard C. Moore.
37 *Syphilitic Immunity and Second Infection in Syphilis. A. C. Stokes.
38 Syphilis of the Nervous System. F. E. Coulter.
39 Diagnosis and Management of Syphilis. M. E. Silver.
40 Congenital Syphilis in the New-born and Young Infants. Mary Strong.
41 The Syphilitic Affections of the Eye. H. B. Lemere.
42 The Microscope in the Practice of Medicine. W. Francis Mitchell.

36. Hereditary Syphilis.—Moore, from the facts as far as known, concludes that the father can infect the embryo through the spermatozon and the mother at the time of conception through the unimpregnated ovum. Moreover, if she contracts syphilis within the first seven months of pregnancy she is liable to infect the fetus. As regards marriage, syphilis is not transmissible after four to seven years without treatment and with treatment, after three and one-half to four years after the disappearance of secondary symptoms, to which must be added six months without treatment and without symptoms. He would authorize marriage after these periods. In inherited syphilis in a child the condition will depend on the severity of the disease in the parents, being more severe when both are infected than when only one is. The more recent the disease in parent the more severe in the child. Specific treatment of the parents has an effect on the grade of the symptoms in the fetus. A large proportion of children of syphilitic parents are defective, about one-third are still-born and abortions are frequent.

37. Syphilitic Immunity.—From a study of the subject and from correspondence, Stokes concludes that second infection may occur in syphilis about as often as in smallpox or measles,

say once in 2,500 cases. He finds no case on record where it occurred in less than two years after the appearance of the secondary symptoms of the first attack. Usually the immunity lasts for life. Colles' and Profeta's laws are no exception to Ehrlich's hypothesis of immunity. The second infection is more frequent in hereditary than in acquired syphilis.

Medical and Surgical Monitor, Indianapolis.

June 15.

43 On the Surgery of the Hypertrophied Prostate. Bransford Lewis.
44 Some Elements to be Considered in Urinalysis. Microscopy. J. W. Crismond.
45 Gersuny's Operation for Saddle-back Nose. Joseph R. Eastman.
46 The Relation of Blood Pressure to Shock. Charles R. Sowder.

Journal of Nervous and Mental Disease, New York.

June.

47 Presidential Address, American Neurological Association. J. W. Putnam.
48 *Tabes and Muscular Atrophy. Joseph Collins.
49 *Contribution to the Study of the Achilles-jerk and the Front-tap. G. L. Walton and W. E. Paul.
50 Three Cases of Progressive Muscular Dystrophy Occurring in the Male Members of a Single Family, and Commencing at the Same Age in Each. C. H. Bunting.
51 Remarks on Primary Neurotic Atrophy (Charcot-Marie-Hoffman Type), with Report of a Case in Which There Was Excessive Indulgence in Tea and Coffee. Alfred Gordon.

48. Tabes and Muscular Atrophy.—Collins reports cases where tabes was complicated with muscular atrophy and studies the pathology. The first case was one of tabes with atrophy of neural origin, the lesions of the peripheral nerves being a degenerative neuritis. The tabes was not typical. The second case had been called syringomyelia by certain persons referring to it, a diagnosis for which the author sees no grounds. He thinks the most legitimate interpretation to be put on it is that the cause of the atrophy was a multiple neuritis probably of alcoholic origin. The third case showed apparently no symptoms of tabes until a careful examination revealed them. The muscular atrophy might either be dependent on a peripheral lesion, such as a neuritis, or due to a thrombosis of the cornual branch of the anterior spinal artery. He notices some cases reported by others.

49. The Achilles-Jerk and the Front-Tap.—The conclusions reached by Walton and Paul are that the Achilles-jerk is as constant in health as the knee-jerk, and varies less and is the most easily elicited and uniform of all tendon reflexes. It usually disappears early in tabes and is as diagnostic as the knee-jerk. The enfeeblement of the latter on one side or both may be due to prior toxic influence, as diphtheria. This may also be true of the Achilles-jerk. The front tap, which is made by tapping the tibialis anticus while the foot is flexed dorsally, thus producing plantar tension, is generally present bilaterally and in about 40 per cent. of normal individuals, in some very active. Its presence alone does not establish disease or indicate excessive irritability. In organic disease it is generally increased with the other reflexes in hypertonic, and decreased in hypotonic states. He has found it present in about 71 per cent. of cases of functional neuroses and in 75 per cent. of epileptics. Both of these reflexes deserve to be put on the list of routine tests for purposes of diagnosis, but this is particularly true of the Achilles reflex.

University of Pennsylvania Medical Bulletin, Philadelphia.

June.

52 *An Experimental Study on the Regeneration of Posterior Spinal Roots. William G. Spiller and Charles H. Frazier.
53 *A Note on the Histology of Vernal Conjunctivitis (Fruehjahr's Catarrh). G. E. de Schweinitz and E. A. Shumway.
54 Note on the Agglutination and Pathogenicity of the Bacillus Subtilis. S. S. Kneass and Joseph Sailer.
55 Partial Paralysis of One Upper Limb, Resulting from a Vascular Lesion of the Lateral Column and Anterior Horn on the Corresponding Side of the Spinal Cord. William G. Spiller and Theodore H. Welsenburg.
56 An Adjustable Anatomical Table. Gwilym G. Davis.
57 A Case of Colon Infection Simulating Typhoid Fever. Joseph Evans.
58 Fat Crystals in the Spinal Cord. Daniel J. McCarthy.
59 *A Contribution to the Chemical Pathology of Acromegaly. David L. Edsall and Caspar W. Miller.
60 Karyokinesis in the Macroblast. C. Y. White.

52. Regeneration of the Posterior Spinal Roots.—Spiller and Frazier have experimented on dogs, performing laminectomy and exposing and dividing the posterior roots of three spinal segments about 1.5 cm. from their point of entrance into the dura; the divided ends of the lowermost three were brought into apposition by a silk suture. The other two remained in apposition without any artificial means. In the only successful case the dog was killed ten months after operation and the spinal cord removed and studied microscopically. They found the intramedullary portions of the roots operated on entirely degenerated and no young nerve fibers anywhere in the usual distribution of the posterior roots within the cord. The conditions for regeneration were made as favorable as possible, but it did not occur. They think their experiment is rather conclusive, though they regret that more animals did not survive to corroborate the results.

53. Spring Catarrh.—A case of this disease is reported by de Schweinitz and Shumway with microscopic examination of the excised tissue of the growths from the superior tarsal conjunctiva. Their findings correspond with the description of the growths by Vetsch, Horner, Uhthoff, Knies, Taylor, Schoebl, Haab and Fuchs. Neither epithelium nor connective tissue elements especially predominated in the specimens, as each constituted a definite portion of the new growth.

59. Acromegaly.—Edsall and Miller have experimented on the nutrition and elimination of two cases of acromegaly, giving reports in detail. Their findings seem to show that there is in acromegaly a growth of abnormal bone rather than an abnormal growth of bone, and that there are very marked abnormalities in the soft tissues as well as the bones. The alteration in the bone is the result of metabolic abnormalities rather than a mere tendency to distorted overgrowth.

Maryland Medical Journal, Baltimore.

June.

61 *A Further Investigation of the Milk Supply of Baltimore, with Especial Reference to Its Suitability for Infant Feeding. Edwin H. Schorer and Victor H. Bassett.
62 Some Remarks on a New Modification of the Bottini Operation. W. B. Wolf.
63 Method of Instruction in Surgical Pathology. J. C. Blood-good.

61. The Milk Supply of Baltimore.—Schorer and Bassett have investigated the milk supply of Baltimore, both at the dairies and retailers, and find that it is very generally adulterated by water and that preservatives are so common that a large proportion of the milk sold should be considered unsuitable for infant feeding. Adulteration, they think, occurs largely in the hands of retailers. The bacterial count and acidity test are satisfactory means of determining the suitability of milk for infant feeding and are of greater value than the ordinary physical and chemical tests. The standard proposed by Park, that of 500,000 bacteria per c.c. at the receiving stations and 1,000,000 in milk offered for sale, are practicable standards for Baltimore, and can be met by moderate care in the production of milk, and refrigeration later. With slightly improved conditions a number of the better dairies could supply milk which could be certified and contain less than 100,000 bacteria per c.c.

St. Louis Courier of Medicine.

June.

64 The Differentiation of Complements. Carl Flach.
65 *Relief of Bladder Symptoms by Treatment of the Uterus, and Vice Versa. H. S. Crossen.
66 The Value of the Static Machine as a Therapeutic Agent. H. N. Chapman.
67 The Relation of Modern Researches on Immunity to Physiology. John Zahorsky.

65. Bladder Symptoms and the Uterus.—Crossen reports a case of uterine disorder with various symptoms associated with it, including bladder disturbance, and this seemed to be the principal difficulty. It was treated with poor success for a number of years. He operated, opening the posterior cul-de-sac, and loosened up the uterus from adhesions. He then performed the Alexander operation, with the result of completely curing the bladder difficulty and all the other symptoms. In another case there was incontinence of urine, due to destruction of the urethra by a syphilitic ulcer, unrelieved by operation. In studying the case he concluded that the failure was due to dragging of the displaced uterus on the neck of the bladder and the irritation of the catheter in the wound, so he opened the abdomen, broke up the adhesions, attached the

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fundus uteri to the abdominal wall and then repaired the pelvic floor. When the patient had recovered he then operated a second time directly to relieve the uterine incontinence. The result was perfect, which he attributes largely to the uterine operation. In still a third case there were symptoms attributed to injury of the pelvic floor with downward displacement of the uterus, which were cured by washing the bladder out with boric acid solution.

Illinois Medical Journal, Springfield.

June.

68 *President's Address, Illinois State Medical Society. M. L. Harris.
69 *Food. J. A. Wesener.
70 The Renaissance. J. L. Wiggins.
71 *Some Observations on Iodophilia. Adolph Gehrmann.
72 Pelvic Abscess. J. A. Baughman.
73 Operative Dysmenorrhea. G. Kolischer.
74 Notes on the Treatment of Puerperal Infections. Thomas J. Watkins.
75 Brometone. E. Fletcher Ingals.

68. See abstract in THE JOURNAL, xl, p. 1304.

69. **Foods.**—Wesener describes the process of digestion and goes at length into the question of adulteration, showing that a large proportion of the articles of food in daily use are more or less sophisticated. The finer qualities of flour are an exception; it is rare to find them adulterated. Among the food substances that are absolutely pure he includes flour, cereals, meat and fresh vegetables. Of all the food preservatives used formalin is the most harmful as acting directly as an irritant on the gastrointestinal tract, making the proteids of milk and other substances in which it is used indigestible. The arrangement of a well-balanced diet is a complex matter and largely varies with individuals. The tendency to overeat is especially condemned.

71. **Iodophilia.**—Gehrmann reviews the subject of the iodin reaction on the part of the white cells, which is most constantly found in connection with suppuration, diabetes and severe anemia. He is inclined to think that iodin-staining substances are of the nature of glycogen rather than amyloid. The test should be more generally employed.

Albany Medical Annals.

June.

76 *The Prevention of Puerperal Eclampsia. John T. Wheeler.
77 *Report of a Case of Tetanus Treated with Antitetanic Serum. Charles B. Mallery.

76. **Puerperal Eclampsia.**—The importance of frequent examinations of the urine in pregnant women is insisted on by Wheeler, who believes that women themselves should be taught to make examinations, and if any warning symptoms occur for the physician to carry them on. He always teaches his patients to make the test if they reside at a distance or are poor or there is anything that prevents close personal attention.

77. **Tetanus.**—Mallery reports a case of tetanus successfully treated with antitetanic serum, and he has looked up the literature on the matter. He finds 277 cases thus treated with a general mortality of 63 per cent., and as compared with the cases treated without antitetanic serum the value of the method is made evident. The small mortality of the St. Louis outbreak from infected diphtheria antitoxin is attributed by Fisch to the preventive use of the serum. He concludes that his own case would have been fatal without this treatment. The condition was desperate when it was begun, and was at least arrested by 40 c.c. of the antitoxin. The effect of the serum treatment was also noticeable in the speed of recovery. Reports show that favorable cases treated in other ways recover slowly and that muscular rigidity, and especially trismus, continues for weeks and months. Had he been able to give the serum in larger quantities at first and dared to use it as he did later, he believes that he could have cured the patient much quicker. He also doubts whether there is any notable difference as to the method of injecting, whether it is put under the skin by subcutaneous injection or into the spinal canal, the vital point being the early use of the remedy in large quantities. In his case he used 400 c.c., or 20,000,000 units, injecting it indiscriminately under the skin of the legs, arms, chest or abdomen.

Archives of Pediatrics, New York.

June.

78 A Review of the Work of the American Pediatric Society. J. P. Crozer Griffith.
79 The Changes in the Management of Laryngeal Diptheria Treated by Intubation. Edwin Rosenthal.
80 *The Paroxysms of Whooping Cough Treated by Pulling the Lower Jaw Downward and Forward (Naegeli). Jacob Sobel.
81 Congenital Asymmetry or Hemihypertrophy in an Infant. A. Hymanson.
82 A Case of Ludwig's Angina from Infection of the Lingual Frenum. Charles J. Aldrich.

80. **Whooping Cough.**—Sobel finds, as a result of his experience with the Naegeli maneuver for overcoming whooping cough, that: "1. Pulling the lower jaw downward and forward controls the paroxysms of whooping cough in most instances, and most of the time. 2. The method is usually more successful in older children than in younger ones and infants. 3. In cases without a whoop the expiratory spasm, with its asphyxia, is generally overcome, and in those with a whoop the latter is prevented. 4. As a single therapeutic measure for the control of the paroxysms it deserves a place in the treatment of pertussis and is as successful as any single drug, or even more so. 5. Mothers, nurses and other attendants should be instructed in its use in order that the oncoming attacks, especially at night, might be arrested. 6. The manipulation is harmless, painless and easy of application, without any of the ill effects of drugs; it offers a maximum good effect with a minimum derangement. 7. The only contraindication to its application is the presence of food in the mouth or esophagus. 8. Patients treated in this manner are less likely to suffer from complications and sequelæ than those treated only medicinally; they emerge from the disease in far better condition, less exhausted and less emaciated because vomiting has been controlled. 9. It is advisable to try the maneuver in other spasmodic coughs and laryngeal spasms (laryngismus stridulus, pressure of enlarged cervical and bronchial glands, influenza, glottis spasm in catarrhal laryngitis), although my experience has seemed to show that it is far less efficacious in these conditions than in whooping cough. 10. This method being directed mainly to the control of the glottis spasm, does not preclude the advisability of supporting and sustaining the patient, guarding his gastrointestinal tract, establishing equilibrium in the nerve centers and affording him every possible hygienic advantage. 11. It is particularly indicated in instances complicated with diffuse bronchitis, bronchopneumonia, convulsions, epistaxis, subconjunctival or subcutaneous hemorrhage, or sublingual ulceration and in those children who by virtue of age, the presence of rachitis, scrofula or general debility are predisposed to serious complications and sequelæ."

Ophthalmic Record, Chicago.

June.

83 Some Ophthalmic Cases I Have Seen. Alex. W. Stirling.
84 *The Ophthalmoscopic Examination of the Macula. Edward Jackson.
85 *Spring Catarrh. Wilson P. Malone.
86 A Note on the Use of Jequiritol and Jequiritol Serum (Merck). Casey A. Wood.
87 The Action on Mucous Membranes of Silver Salts, with Especial Reference to Some of Their New Organic Forms. Arthur G. Hobbs.
88 Ineffectual Attempt to Remove a Piece of Steel from the Eye with the Haab Magnet. William H. Wilder.
89 Incised Wound of the Cornea Made by a Fragment of Spectacle Lens. S. Mitchell.

84. **Ophthalmoscopic Examination of the Macula.**—Jackson describes the methods of studying the ophthalmoscopic appearances of the macula, and shows how it can be done with the ordinary ophthalmoscope with an undilated pupil, if the instrument is used to the best advantage. "The corneal reflex can be so reduced as to allow the surgeon to see the pupil alongside of it, by making the sight-hole small, 1.5 mm. in diameter, and holding it so that one edge of it is in front of the center of the surgeon's pupil, or by using a half mirror. The visible field can be enlarged by getting close to the patient's pupil and excluding all unnecessary light. The illumination of the retina can be rendered brilliant at a certain point, or diffused equally over the whole visible field, by adjusting the source of light at the proper distance from the mirror, and by placing the right lens in a trial frame before the patient's eye."

85. **Spring Catarrh.**—This condition was first noticed by Arlt, and subsequently by others, including Saemisch, who gave it the name. The condition is here described by Malone. He gives the symptoms and peculiar appearances. There is photophobia, stinging pain, great itching with the addition of a stringy muco-purulent secretion, interfering with vision, all aggravated by warm weather and disappearing during the winter months. On examining the eye we may find only the conjunctiva covering the tarsus involved, that is, in the tarsal variety; or, it may be limited to the conjunctiva of the ball, that is, the bulbar variety, or both may exist together. On everting the upper lid we find it covered with broad, flattened, papilliform excrescences over the tarsus and over the whole a delicate bluish-white film as if a thin layer of milk had been spread over the conjunctiva. The growths may cover the whole lid or may be few and small and less characteristic. If the bulbar conjunctiva is involved it is thickened and unequally raised at the limbus, forming pale, translucent or waxy nodules encroaching on the cornea, but extending most over the conjunctiva. They may be scattered or involve the whole circumference. He thinks it generally begins in the superior limbus, then the inferior, and both sides then become involved. It is very similar in some respects to trachoma, but is not identical in its structure, and he points out the differences, which are leucocytic and diffuse infiltration, no clearly defined nodules, as in trachoma, the different situation and the thick, resisting bands as compared with the thin and delicate ones of trachoma. He has found little good from cauterization for the tarsal type. He curetted the growths off clean and reports a cure in one case, with another greatly improved. He thinks if we can remove from the tarsal cartilage all of the diseased tissue, we may have a cure. With the bulbar variety he has had no special success. He uses salicylate of sodium, 10 gr., with cocain 2 to 5 grains to the ounce, four or five times a day as a soothing lotion.

American Journal of the Medical Sciences, Philadelphia.
June.

90 *Amyotrophic Lateral Sclerosis. Joseph Collins.
91 *Congenital Dislocation of the Shoulder. Charles Greene Cumston.
92 A Case of Myelogenous Leukemia, with Several Unusual Features (Absence of Eosinophilic Leucocytes). Charles E. Simon.
93 *The Dermatoses Occurring in Exophthalmic Goiter. James Nevins Hyde and Ernest L. McEwen.
94 *Notes on the Employment of Epicarin in Tinea Tonsurans and Tinea Circinata. Arthur Van Harlingen and Henry K. Dillard, Jr.
95 *The Blood-pressure Reaction of Acute Cerebral Compression, Illustrated by Cases of Intracranial Hemorrhage. Harvey Cushing.
96 A Review of Some of the Older Writings on Infant Feeding. Samuel McC. Hamill.
97 *A Case of Gangrene of the Lung Cured by Operation. David Riesman, A. C. Wood and G. E. Pfahler.
98 *Zomotherapy in Tuberculosis. Lawrason Brown.
99 Notes from the Throat Department of the Pathological Laboratory of the Manhattan Eye and Ear Hospital. Jonathan Wright.

90. **Amyotrophic Lateral Sclerosis.**—A case is reported by Collins with elaborate microscopic findings. He discusses the nature of the disorder, its starting point and pathology, its symptoms, etc. It is characterized by symptoms of progressive muscular atrophy of the Aran-Duchenne type, complicated with bulbar involvement, plus spastic paralysis, and exaggeration of tendon jerks all over the body. The morbid process consists in a decay of the peripheral motor neurons of the ventral horns, terminations of the pyramidal neurons, and atrophy of the column and the commissural cells of the gray matter. It extends centrifugally in the peripheral motor neurons, centrifugally and centripetally in the central motor neurons. The microscopic features are atrophy of the anterior horns, with disappearance or lessening of its cell constituents without vascular change, degeneration of the fundamental tracts to a greater or less extent, degeneration of the pyramidal tracts to a varying extent. The question as to which is first involved, the peripheral motor neuron or the central motor neuron, is not answered, though he is inclined to believe that one may be primarily involved in one case and the other in another. It is not necessary to have complete involvement of both systems of neurons for clinical purposes. The pyramidal columns may be uninvolved even in the typical form. Other parts of the cord that have been found involved are the posterior columns and the direct cerebellar tracts occasionally. He does not consider it a variety of spinal progressive muscular atrophy. From a study of the literature of 94 typical cases, adding 10 of his own observation, he finds a large number of etiologic factors reported. Trauma, he thinks, has but little etiologic influence. There is much to suggest infection or intoxication processes. A number of cases seem to indicate this, some following parturition, some were syphilitic. But all the factors that have been incriminated, such as injury, exposure, intoxication and the like, Collins thinks are only exciting causes. There is something back of these which is the real cause, and he thinks we should look to the pathologic chemist for the discovery of the real toxic agency in the disease.

91. **Congenital Shoulder Dislocation.**—The etiology and pathology of this disorder is indefinite, according to Cumston, no theory giving thorough satisfaction. It is difficult to explain why it should be more common in girls than in boys, and why such cases are more frequent in girls belonging to the lower classes than those of well-to-do parents. Possibly rickets has something to do with it. Heredity is an important factor to be considered. He is inclined to think that alcoholism, tuberculosis, syphilis, etc., in the ancestors are among the potent factors. The most striking pathologic lesion is arrest in the development of that portion of the skeleton on which the muscles take their insertions. The muscles themselves are atrophied. The capsule of the joint is intact, and its insertions are normal, but it is relaxed, very distended and occasionally considerably elongated. The diagnosis is discussed at length by Cumston. The question as to whether it is a case of obstetric trauma, obstetric paralysis or cerebral or syphilitic, or tubercular, etc., in nature is noticed. There is a complete absence of fever. All the muscles have their voluntary contractility immediately after birth; their atrophy is due to long disuse. In the vast majority of cases the only satisfactory treatment is surgical. He favors Duplay's incision in cases where free operation is required, otherwise the simple anterior incision of Ollier will suffice. A case is reported in detail.

93. **Exophthalmic Goiter.**—Hyde and McEwen report several cases of cutaneous disorders in connection with Graves' disease; one of hidrocystoma, one of telangiectases, one of cutaneous pruritus, one of pruritus and angioneurotic edema. These are discussed at length and especial attention called to the case of hidrocystoma, which shows that it may develop in women nowise exposed to the ordinary causes, such as moist atmosphere, etc. The authors review the literature of the cutaneous syndromes of Graves' disease and suggest that in some non-typical cases a point of interest might arise in view of the existence of the skin lesions.

94. **Epicarin.**—This substance is said to be a condensation product of creotinic or creosotinic acid and B. naphthol, and to combine the properties of creosote and naphthol. It was first brought into notice some years ago by Kaposi. It is a reddish amorphous powder with a slight odor resembling acetic acid, is soluble in alcohol, ether and liquid vaselin. Van Harlingen and Dillard have treated a number of cases of tinea circinata and tinea tonsurans with this drug, using principally a tincture of a 10 to 20 per cent. solution and offer the following conclusions:

1. In epicarin we have an important addition to the means of combating ringworm of the scalp. Used, preferably, in the form of a tincture of 10 to 20 per cent. strength and, after epilation, it appears to act more rapidly than any of the remedies heretofore employed in restoring the hairs to a normal condition. 2. In ringworm of the body the tincture seems to be irritating and slow in action. The ointment acts better, but is not equal to the ammoniated mercury ointment, nor to most of the remedies ordinarily employed. 3. In (a single case of) favus the result of the use of epicarin was such as to encourage trial. 4. In scabies, so far as our experience goes, epicarin in the form of the tincture and simple ointment is apt to prove very irritating and is by no means equal to the sulphur and naphthol nor to the other ointments ordinarily employed.

95. **Blood Pressure in Cerebral Compression.**—In summarizing his article Cushing calls attention to the following points:

Varying degrees of rapid increase in intracranial tension produce disturbances in the intracranial circulation. To these circulatory

disturbances the symptoms of compression are solely due. The condition known as acute cerebral compression may be conveniently subdivided into four stages, dependent on the degree of circulatory alteration which has been reached. Each of the stages has its own more or less characteristic symptom-complex. The major or underlying symptoms originate in the centers situated in the medulla, and are only called out when the degree of intracranial tension begins to approach the arterial tension so that anemia is threatened. A circulatory condition in the medulla which borders on anemia has the effect of stimulating the vasomotor center. Thus, a rise in blood pressure is occasioned which restores the local circulation. The extent of this rise may be taken as an indication of the degree of advancement of the compression. Beyond a certain point, however, this reaction can not take place. The vasomotor center under these circumstances fails, and the respiratory efforts cease entirely. In conjunction with other symptoms, a progressive increase in arterial pressure or a high degree of the same, which has been already reached, or a pressure which exhibits from moment to moment great alterations in level may be taken as a certain indication of the advisability of early operative intervention. In case there are localizable symptoms the site of trepanation is plainly indicated. In case of generalized compression from widespread hemorrhage when there are no localizing indications, the intracranial tension should be relieved by the elevation of a large osteoplastic flap from one hemisphere or the other, with a corresponding opening in the dura.

97. Gangrene of the Lung.—In the case reported by Riesman, Wood and Pfahler, the condition was desperate, and recovery apparently impossible by any means except operation. The fifth rib was resected, the gangrenous portion of the lung found immediately below the pleura and some necrotic lung tissue removed. The cavity was as large as a man's clenched fist, as found by digital examination. The parts were cleansed with gauze sponges, which brought away all loose matter. It was then packed with sterile gauze and the wound was redressed daily. While the discharge was very profuse at first, the patient gradually improved, and only a month later was in a fair condition, the cavity decreasing in size. From that time on recovery was rapid and satisfactory. The authors discuss the condition and its treatment, insisting on the importance of definitely locating the trouble, using skiagraphs if necessary, making ample opening in the pleura and rib resection, securing adhesions to the pleura before entering the lung, and if they do not exist, stitching the two layers together around the proposed opening into the lung, which may be made in forty-eight hours or sooner if the patient's condition demands it. The condition seems to follow lobar pneumonia in most cases. They particularly emphasize the absence of fever in the case; the temperature was normal before operation and only rose to about 102 or 103 after the resection for a day or so. Another point mentioned particularly is the gangrenous smelling sputum and the absence of elastic tissue. The value of the *x*-ray in diagnosis is emphasized, and they remark that the acute form is more favorable in its prognosis than the chronic. The mortality without operation is necessarily very high, 70 or 80 per cent. Under operative treatment a death rate of 34 per cent., according to Garré and Sultan, is about normal. In some cases physical examination and examination with the *x*-ray after operation showed a normal lung where there had previously been a gangrenous cavity. The second radiograph in this case also showed a restored lung. Whether there is a true hyperplasia of the air passages or merely an enlargement of the existing ones, can not be said. The importance of adhesions is also emphasized.

98. Zomotherapy in Tuberculosis.—From experiments made on dogs in the treatment of tuberculosis, Brown concludes that raw meat has no perceptible effect on the duration of experimental tuberculosis in dogs if the bacilli are virulent and a sufficient number injected intravenously; that it has no effect on the prolongation of the duration of experimental tuberculosis in dogs, even if the bacilli are attenuated, provided a sufficient quantity is injected; that under the same conditions dogs fed on a mixed diet with no raw meat may live a much longer time. As regards the use of meat in pulmonary tuberculosis, he says that it is highly essential in the dietetic treatment and that the judicious mixture of carbohydrates, fats, etc., is essential to the treatment. Raw meat is better than meat well cooked. Meat juice is of great value in suralimentation. It can be taken when the patient can take no other form of meat. The juice from raw meat seems slightly if at all better than the juice from meats slightly browned. The disadvantages of preparing and preserving raw meat juice more than offset its advantages. Patients who object to juice from raw meat will willingly take that from meat browned. It is of value as it can be administered in the form of jellies, ices, etc.

American Practitioner and News, Louisville, Ky.

March 15.

100 Some Reminiscences in the Lives and Characters of the Old-time Physicians of Louisville. T. B. Greenley.
101 The Pulmonary Circulation, More particularly in Relationship to Variations in Cardiac Activity. T. G. Brodie.

Northwestern Lancet, Minneapolis.

June 1.

102 Some Remote Effects of Eye-strain. George H. Thomas.
103 Retropharyngeal Abscess in Adults. J. A. Watson.
104 Post-operative Nasal Synechiæ. Marion A. Mead.
105 A Case of Partial Placenta Previa, with Premature Total Detachment, Complete Uterine Inertia and Dual Fatality. W. A. Chamberlin.
106 Report of a Case of Arsenical Neuritis. H. G. Parker.

June 15.

107 Intestinal Perforation in Typhoid Fever. Edwin T. Ramsey.
108 Drug Treatment for Tuberculosis. Lester W. Day.
109 Acute Inflammatory Glaucoma; Diagnosis and Treatment; Report of Case. E. F. Reamer.

Medical Fortnightly, St. Louis.

June 10.

110 Report of Case of Pistol-shot Wound in Neck; Laminectomy; Results. J. C. Murphy.
111 *Wounds Inflicted by Modern Agricultural Implements. D. W. Basham.
112 Address of Welcome, Tri-state Medical Society. Robert H. Goodlet.

111. This article has appeared elsewhere. See THE JOURNAL, xl, 127, p. 1753.

Medical Age, Detroit, Mich.

June 10.

113 A Preliminary Report on the Treatment of Tabes with the X-Ray. John W. Daniel.
114 Hepatic Tumors and Hepatosis, with Its Treatment. Byron Robinson.
115 Some Practical Thoughts on Insanity. Charles W. Hitchcock.

Medical Examiner and Practitioner, New York.

June.

116 A Study on Light. J. Mount Bleyer.
117 Constipation. James P. Tuttle.
118 The Bacteriology of the Puerperal Uterus; Its Relation to the Treatment of the Parturient State. S. Marx.
119 Some Notes on Pollacci's New Method of Detecting Albumen in the Urine. Gordon Lindsay and William J. Giles.

California State Journal of Medicine, San Francisco.

June.

120 Report of Medical Legislation and Education. Henry Gibbons, Jr.
121 Report of Medical Education and the Work of the Board of Medical Examiners. W. S. Thorne.
122 Prostatic Obstructions. (To be continued.) Granville MacGowan.
123 A Few Remarks on Gastric Surgery. Dudley Tait.
124 Bone Transplanting and Report of a Case. A. W. Morton.

Brooklyn Medical Journal.

June.

125 Ventral Suspension and Ventral Fixation for Prolapse of the Bladder with the Uterus. Robert L. Dickinson.
126 The Medical Witness. Arthur C. Brush.
127 Economics of the Practice of Medicine. Heber N. Hoople.
128 The Business Aspect of Medicine. Edward Hodges.
129 Early History of Medicine in Kings County. William Schroeder.
130 Glaucoma. James C. Hancock.

Iowa Medical Journal, Des Moines.

June.

131 Vital Statistics; Their Value to the Physician and Some Suggested Reforms in Registration. F. I. Herriott.
132 Public Health Service. W. J. Findley.
133 Gonorrhea in the Female. W. Bowen.
134 The Etiology of Convergent Squint. Eugene R. Lewis.
135 Atresia of the Vagina, Pregnancy and Cesarean Section. L. W. Littig.

Occidental Medical Times, San Francisco.

June.

136 The Repair of Ventral Hernias and a Word as to Their Prevention. J. Henry Barbat.
137 Biomechanical Laws in Medicine. (Concluded.) Moritz Benedikt.

New Yorker Medicinische Monatschrift.

April.

138 Ein welterer Beitrag zur Anwendung der electrischen Lichtstrahlen bei Tuberculose. W. Freudenthal.

Canadian Practitioner and Review, Toronto.

June.

139 Extirpation of the Prostate, Freyer's Method. F. P. McNulty.
140 Hodgkin's Disease. William Allen.

Medical Bulletin, Philadelphia.

June.

141 The Evolution of the Trained Nurse. Walter T. Merrick.
142 Psoriasis, Secondary Syphilis. John V. Shoemaker.
143 Treatment of Cough. George W. Ptromm.

Post-Graduate, New York.

June.

144 Practical Management of Acne and Rosacea. Thurston G. Lusk.
145 Some Remarks Suggested by Recent Rhinological Progress. Thomas J. Harris.
146 Recent Advances in Orthopedic Surgery. Henry L. Taylor.
147 Intravascular Medication, with Special Reference to Septicemia. Antonio Fanoni.

Cleveland Medical Journal.

June.

148 Remarks on the Lymphatic System. C. A. Hamann.
149 Some Freaks in Surgery of the Gall Bladder and Bile Ducts, with Report of Cases and Exhibition of Specimens. A. F. House.
150 Paralysis of the External Recti Muscles Appearing After a Blow on the Skull. Edward Lauder.
151 Ulcus Ventriculi. Henry C. Luck.

New Orleans Medical and Surgical Journal.

June.

152 The Technic of Prostatectomy. Ramon Guiteras.
153 A Few Differential Characteristics in the Anatomy of Some of the Lower Species Compared with that of Man; with Passing Allusion to Analogy and Homology. W. H. Dalrymple.
154 Yellow Fever in Havana and Cuba, 1902. Carlos J. Finlay.

New York State Journal of Medicine, New York.

June.

155 President's Address. New York State Medical Association. Jeremiah R. Sturtevant.
156 A New Method of Denuding and Introducing Sutures in Perineal Operations. Alfred H. Tucker.
157 Clinical History and Treatment of Diabetes. Charles O. Green.
158 Intestinal Obstruction. J. B. Harvie.
159 *Strangulated Hernia in Children Under One Year. W. B. Reid.
160 *The Advantages of Nitrous Oxid in General Surgery; Exhibition and Description of a Stopcock for Its Administration with Varying Percentages of Oxygen. H. W. Carter.

159. See abstract in THE JOURNAL, XXXIX, p. 1204.

160. Ibid., p. 1205.

Memphis Medical Monthly.

June.

161 The Conduct of Labor. Alexander Erskine.
162 Some Observations in European Hospitals with Special Advantages for Genitourinary, Skin and Rectal Study. Eaton K. McNeil.
163 The Relation of the Nurse to the Physician. G. G. Buford.
164 Diseases of the Stomach Secondary to Those of the Intestines and Liver. R. J. McFall.

Dominion Medical Monthly, Toronto.

June.

165 Appendiceal Diseases. A. Groves.
166 A Case of Erysipelas Migrans Universalis in an Infant Ten Weeks of Age, with Recovery. W. H. Pepler.
167 Hemophilia Synonyms, Hemorrhagic Diathesis or Idiosyncrasy, Hemorrhaphilia Heredity Hemorrhage—Ger. Blüterkrankheit or Blutungssucht. A. J. Harrington.
168 Report of Two Cases of Erysipelas Migrans, Probably Contracted from Patients Suffering from Scarlatina. Graham Chambers.

Denver Medical Times.

June.

169 A Case of Neglected Empyema. A. M. Holmes.
170 Uncinaria Americana—An Intestinal Parasite. C. D. Spivak.
171 Sudden Death. Edward C. Hill.
172 Memoir of Dr. Henry King Steele. Henry Sewall.
173 Cerevisine in the Treatment of Gonorrheal Ophthalmia. Emma Jane Keen.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

June 13.

1 *Muscular Movements and Their Representation in the Central Nervous System. Charles E. Beevor.
2 *Observation on the Treatment of Cancer of the Rectum. W. Watson Cheyne.
3 The Surgery of the Simple Diseases of the Stomach. B. G. A. Moynihan.
4 Case of (so-called) Idiopathic Dilatation of the Esophagus. C. B. Lockwood.
5 *Beneficial Results of Gastro-enterostomy in Some Cases of Irremovable Carcinoma of the Stomach, in Which the Pylorus is Not Obstructed. Bilton Pollard.
6 Case of Hypertrophic Pulmonary Osteoarthropathy. Sydney W. Curl.

1. Muscular Movements.—This first lecture of Beevor's is given over to a discussion of muscular movements of the fingers and hands, and is too detailed for abstracting.

2. Cancer of the Rectum.—Cheyne discusses the treatment of cancer of the rectum, more especially the radical treatment. The majority of surgeons agree as to the value of operation in suitable cases. Two questions arise: First, the value of operation; secondly, the risks it involves. In the majority of cases of rectal cancer the growth is slower than in most other places. Therefore, there is nothing inherent in the morbid processes that opposes radical operation, nor is there anything in the condition which makes it specially difficult in suitable cases. The rectum is comparatively accessible from below, and the whole of it can be reached by the combined abdominal and perineal route. Moreover, the lymphatic glands run in close contact with the intestinal wall, and if operation is done sufficiently early, when the glands are not too much affected, there is a very fair percentage of recoveries as compared with cancer elsewhere after operation in suitable cases. The proportion, however, of suitable cases is somewhat less than in cancer of the breasts or extremities. Cheyne estimates that only about 20 per cent. of the cases that present themselves to the surgeon will be fit for radical operation, with a view to the complete removal of the disease, though this percentage may be somewhat increased by recent improved methods. However, aside from complete recovery, operation may prolong life and save the patient a great amount of suffering. As regards mortality, it is no doubt higher than that after operations through unbroken skin, such as amputations, excision of the breast, etc., though in such cases the mortality is exceedingly slight. The question as to what are suitable cases is answered by him as follows: Operation should be undertaken only when the patient is in a fair state of health and likely to stand operation and prolonged convalescence; in those who are not suffering from organic disease or where there is no evidence of extension to other parts of the body. The chief local contraindication is a fixed bowel, which means that the growth has penetrated the intestinal wall and begun to probe into the surrounding tissue. In case of tumor situated low down and adherent to the posterior vaginal wall, there is a possibility of good results. Another point which has been considered a contraindication is the situation of the cancer. He thinks the dictum has been a little too decided on this point when it is said that a cancer that can not be reached by the finger to its upper limit is inoperable. By opening the abdomen and keeping the intestines well out of the way the bowel can be divided above the cancer, and if it can not be united with the rectal extremity, it can be brought out at a colotomy wound. The question of primary colotomy is discussed. He thinks it should be an exceptional procedure rather than the general rule. As to the methods of gaining access to the disease, the perineal and vaginal routes are the suitable ones where the disease is quite low down. The sacral and abdominal or combined abdominal and perineal where the disease is high up. In the majority of cases the sacral route is preferable. As regards the combined abdominal and perineal operation as done by Quénu, it is on trial. So far its mortality has been considerable. Cheyne prefers personally to remove the affected portion of the intestine above a clamp; then invaginate and stitch up the lower end of the bowel and leave it in position while the other end is brought out in the groin and the ligature—which has been applied around the bowel before the removal of the disease—left *in situ* for two or three days if possible. There is no special advantage in dissecting out the lower end of the rectum. To avoid sepsis he cautions against infecting the hands, and besides disinfecting the perineum, he also stitches up the anus tightly to prevent any escape of matter during the course of the operation. Moreover, when possible, he peels down the glands and ligates the bowel in two places, the ligatures being left long, and brings the rectum as far as possible outside the wound before the bowel is divided. He also generally employs a prophylactic injection of antistreptococcic serum. The author notices Ball's statement in a recent lecture

that we should try to bring down the upper end of the anus more frequently than has been done. He does not favor the radical end-to-end union, but would invaginate the proximal end down into the interior of the distal end, at least one-half to one inch and strip off the mucous membrane of the upper part of the distal end to a corresponding extent. Where this is not possible, he thinks the sacral opening is the preferable procedure, but he does not stitch the open end of the bowel to the skin wound, but rather stitches the skin to the muscular coat of the bowel as far above the divided end as possible, and leaves the ligature on. If he can manage it, he stitches up the wound and completes the operation before cutting off the lower end of the rectum with the tumor. There is some objection to leaving the ligature on for awhile on account of the prevention of the escape of gas, but he has not found it necessary to do anything to relieve the patient before the ligature separates. He thinks in case of sacral anus benefit is derived from Gersuny's suggestion of giving the bowel a half or three-quarters turn before bringing it out. He follows this plan and finds it has great advantage in tending to continence of feces in the artificial opening.

5. **Carcinoma of the Stomach.**—Pollard finds that in some cases where the clinical symptoms point to obstruction of the pylorus from gastric carcinoma, operation is done with the idea of relieving the condition by gastroenterostomy and the growth is found away from the pylorus which is not obstructed. In these cases he believes gastroenterostomy is often still advisable, and reports a case where good results followed. His conclusion is that the clinical signs offer the most important indications for treatment. Where there seems to be obstruction, operation for its relief, even if the anatomic conditions do not indicate it, may be advisable.

The Lancet, London.

June 13.

7 *A Few Jottings in Physiologic Medicine. George Oliver.
8 *Parasyphilis. George Ogilvie.
9 *A Statistical Inquiry into the Prognosis and Curability of Epilepsy; Based on the Results of Treatment. William A. Turner.
10 Malaria as Seen in the Andamans Penal Settlement. Ernest E. Waters.
11 Chronic Suppuration in the Middle Ear; Thrombosis of the Lateral Sinus; General Septic Infection; Operation; Venous Transfusion; Recovery. W. M. Willis.
12 The Aniline Dyes as Therapeutic Agents. Andrew Balfour.
13 A Case of Congenital Deformity of the Skull Associated with Ocular Defects. H. Work Dodd and W. Halliburton McMullen.
14 Chronic Volvulus of the Sigmoid Flexure; Intestinal Obstruction; Operation; Recovery. Herbert W. Allingham and E. Chittenden Bridges.

7. **Blood Pressure.**—Oliver notices the fact of the rhythmic rise of blood pressure after eating, which is a little peculiar when we consider that the splanchnic arterioles dilate and should lower it. The arteriometer, however, shows that the arterial caliber is slightly lessened when the splanchnic diversion takes place, and there is a compensatory reduction of the systemic area of the circulation. He finds a certain amount of venous and capillary contraction which suggests that this increased blood pressure wave is associated with an exudation into the tissues of nourishing fluid during digestion. He also notices the effects of temperature on the blood pressure, and also of exercise, and finds that of all the three leading causes of arterial pressure variations, the influence of digestion is paramount and constant. The long curves of rise and fall produced by meals recur with regularity and persist beyond the temporary variations of blood pressure produced by muscular action and by temperature, which only modify the line of these curves in a mere transitory way. The article concludes with some observations on the influence of altitude on the blood pressure, which shows that it falls up to a certain altitude, say 2,000 or 3,500 feet, and above that is rapidly increased. He thinks these facts have a bearing on practical climatology. He is not aware of a climatic condition that will lower the mean arterial pressure to the same extent as the medium altitudes, and this might be considered in sending patients with plus arterial pressure to mountains in the winter months.

8. **Parasyphilis.**—The address by Ogilvie is an interesting one, criticising the theory of parasyphilitic disorders. He says all that is practically new in the modern teaching of parasyphilis, apart from the name, is the enormous extension given to the deleterious and deteriorating influence of syphilis on the race. The idea is not a new one. There is about one inch of discovery to a whole Pacific ocean of invention.

9. **The Curability of Epilepsy.**—Turner discusses the curability of epilepsy, giving an interesting tabulation of statistics and offers the following summary in conclusion:

"1. A total of 366 cases, chiefly derived from the out-patient records of the National Hospital for the Paralyzed and Epileptic, has been used for the investigation. 2. Only cases of genuine idiopathic epilepsy which had been under constant observation and treatment for a period of at least two years have been taken. All cases of symptomatic epilepsy, or cases otherwise complicated, were, as far as possible, eliminated. 3. The cases have been divided into three series, according as they have responded, successfully or otherwise, to treatment: arrested, improved and confirmed cases. The influence of the various conditions modifying prognosis has been mentioned in detail, the results of the observations being stated in the percentages. 4. A family history of epilepsy will be found more frequently among those who have become confirmed epileptics, but a hereditary history of epilepsy does not necessarily militate against the prospects of arrest or improvement of the disease in any given case. 5. The age at the onset of the disease has an especial bearing on the prognosis. The most unsatisfactory cases are those in which the disease commences under 10 years of age; they show the smallest percentage of recoveries and the largest of confirmed cases. If the disease arises between 15 and 20 years of age, an almost equal percentage of arrested and confirmed cases may be expected. The greatest percentage of confirmed cases is found among those in whom the disease begins between 25 and 35 years of age, from which time onwards there is a steady increase in the expectations of arrest and diminution in the number which become confirmed. 6. The duration of the malady influences the prognosis to the extent that arrest or improvement is much more likely during the first 5 than during the second 5 years. Cases, however, may be arrested even after a duration of from 20 to 30 years. 7. The greatest percentage of confirmed and the lowest percentage of arrested cases occur in those epileptics who are subject to daily or weekly attacks, while conversely, the smallest percentages of confirmed and the highest of arrested cases occur in those whose fits are as infrequent as once or twice a year. 8. The character of the seizures influences the prognosis to the extent that the major attacks are the most tractable; then follow combined major and minor seizures; and lastly, the minor attacks occurring alone. 9. Marriage exerts little if any influence on epileptic fits. Some patients are relieved and others are made worse. In the majority of cases the disease remains unaffected. 10. Pregnancy has little influence on the seizures; at the best there may be only a temporary respite. On the other hand, the puerperium would seem to be especially favorable for the recurrence of fits; while lactation also is not without an exciting influence in their production. 11. The common incidence of epileptic fits is an irregular periodicity. There are types, however, which have been described as "increasing" and "decreasing," according as the fits increase or decrease in number in a definite period of time, or in which there is a shortening or lengthening of the intervals between the fits. A case of increasing type may by treatment be converted into one of the decreasing variety. 12. Long remissions, induced either by successful treatment or from spontaneous cessation of the fits, sometimes lasting for several years, are not unusual in epilepsy; they are of favorable prognostic value, but are not synonymous with a cure of the disease. 13. From the collected statistics a period of remission for at least nine years has been fixed as the basis on which a cure of epilepsy may be established. With this definition of a cure I regard 10.2 per cent. of epileptics as curable. 14. There are some cases of epilepsy which may be regarded as belonging to a curable type of the disease. These present little or no mental impairment, notwithstanding that fits may have existed for a long period. In the cases in which arrest took place, cessa-

tion of the fits occurred within the first year of continuous treatment in over 50 per cent."

The Practitioner, London.

June.

15 A Few Lessons from Fifty Cases of Operation for Carcinoma of the Tongue. (Continued.) W. H. A. Jacobson.
16 Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. Freyer.
17 Vascular and Toxic Acroparesthesia, or Sensory Disturbances of the Extremities Occurring Independently of Primary Disorder of the Nervous System. H. Batty Shaw.
18 Tuberculosis and the Medical Profession. Alfred Hillier.
19 Atelelosis: A Form of Dwarfism. Hastings Gilford.
20 Some Points of Interest in the Clinical Manifestations of Cerebral Abscess. James Burnet.
21 The Surgical Treatment of Nephritis. J. W. Thomson Walker.
22 The Death Rates of Working-class Communities. Louis Parkes.

Journal of Tropical Medicine, London.

June 1.

23 *Researches on the Etiology of Sleeping Sickness. Aldo Castellani.
24 Tropical Hygiene. (Continued.) W. J. Simpson.
25 The Panama Canal and the Introduction of Yellow Fever in Asia. St. George Gray.
26 A Case of Acute Dysentery in Which Death Occurred from Acute Cardiac Dilatation, Probably Due to Chronic Phenacetin Poisoning. A. T. White.
27 Horder's Clinical Case for Blood Film Work, etc. Designed by Edward Horder, F.R.C.S. Edinburgh.

23. **Sleeping Sickness.**—Castellani finds in a large percentage of cases of sleeping sickness in the cerebrospinal fluid taken during life by lumbar puncture, a trypanosoma. It may be a new species, but rather closely resembles the *Trypanosoma gambiense* of Dutton. It is also found in the blood. He never finds it in the cerebrospinal fluid of other diseases than sleeping sickness. He has also cultivated from the blood of the heart and the liquid of the lateral ventricles in 80 per cent. of his postmortem cases a streptococcus which frequently shows cultural characters different from the *Streptococcus pyogenes*. He has rarely found this during life, and then as a rule *in extremis*. In the first stage of his investigation he attached much importance to the streptococcus, but at that time he had not found the trypanosoma. The facts, however, as regards the later discovery seem to him very suggestive and point to something more than a mere coincidence. He is inclined to conclude that sleeping sickness is probably due to the trypanosoma. At the same time there is frequently a concomitant streptococcic infection in the later stages which may play an important part.

Australasian Medical Gazette, Sydney.

May 20.

28 A Case of Myelopathic Albumosuria. Joseph C. Verco.
29 Notes on the Diagnosis and Surgical Treatment of Gallstones. C. S. Hau.
30 Four Cases of Suppression of Urine. H. Critchley Hinder.
31 The Finsen Light Treatment for Lupus. H. Simpson Newland.
32 Treatment of Nymphomania by Division of Branches of Internal Pudic and Inferior Pudendal Nerves. J. A. G. Hamilton.
33 Sarcoma of Superior Maxilla. C. H. W. Hardy.

Bulletin de l'Academie de Medecine, Paris.

34 (May 19, No. 20.) Du suicide dans la syphilis. A. Fournier.

Presse Medicale, Paris.

35 (No. 33.) Program of Madrid Medical Congress.
36 Report of Third International Congress of Thalassotherapy, Biarritz, April 19-21.
37 (No. 34.) Traitement psychique de l'hystérie. La rééducation. P. E. Lévy.
38 Les complications nerveuses de la grippe. J. Hallé.
39 (No. 35.) Traitement du strabisme. A. Trousseau.
40 *Les réactions cutanées. Réactions caféiques. C. Mantoux.
41 Treatment of Phlebitis. H. Hannequin.—Conduite à tenir dans la phlébite.
42 (No. 36.) L'hémodiagnostic en chirurgie. H. Vaquez and C. Laubry.
43 What the Physician May and Should Do in Odontology. G. Mahé.—Ce que le médecin peut and doit faire d'odontologie.
44 (No. 38.) *Les grands lavages intestinaux dans le traitement de la colite muco-membraneuse. M. de Langenhagen.
45 Tetanus After Gelatin. Published elsewhere. Reviewed page 1542.
46 (No. 39.) La glande thyroide dans la variole. H. Roger and M. Garnier.
47 Etiologie de la dysenterie epidémique. Vaillard and Dopter.
48 (No. 40.) Le suicide dans la syphilis. A. Fournier. See above.
49 Les injections sous-cutanées de sérum gelatineux dans le traitement des hemorragies. M. Labbe and G. Froin. Experimental. Results negative.
50 (No. 41.) Means to Remedy Abuse of Free Hospitals and Dispensaries. M. Lermoyez.—Du meilleur moyen pour éloigner les malades aisés des hôpitaux. See Foreign News.
51 *Dilution sanguine et polyurie. M. Loeper.
52 Electric Baths. F. Allard.—Bains électriques. Technique. Indications.
53 *Artificial Abscess Production in Intoxications. Arnozan and Carles.—Les abcès de fixation dans les intoxications.
54 (No. 42.) Les injections vaginales en obstétrique, gynécologie et hygiène. J. Lucas-Championnière.
55 Methyl Iodid Blister. C. Garnier.—Le vesicatoire (blister) à l'iodure de methyle.

40. **Dermatoses as Cutaneous Reactions.**—Brocq has been proclaiming for some time that lichen, pruritus, urticaria, eczema, psoriasis and erythemata are merely the way in which the skin of certain subjects reacts to certain influences. A single morbid cause may induce the most diverse eruptions in various subjects, and on the other hand, a single form of eruption may be induced by the most diverse causes. These assertions were confirmed by a recent experience at the Broca Hospital. Very strong coffee was served one day to 23 dermatologic patients, and the following day the 7 patients with dermatoses belonging to the above group all presented exacerbations of their cutaneous affection, while none of those with a dermatosis of another character showed any signs of aggravation of their condition. One of the patients had a severe case of eczema, and while under observation a marked aggravation of the condition was noticed on four occasions, once on account of fright in a storm, once on account of bad news, once the morning after a small epithelioma had been removed from her face, and again after ingestion of the coffee. Brocq has emphasized the relations between certain forms of pruritus, especially circumscribed neurodermitis, with daily ingestion of coffee.

44. **Treatment of Muco-Membranous Colitis.**—Langenhagen practices at the French watering-place, Plombières, and treats muco-membranous colitis by slow injection of one-half to two liters of water at a temperature of 100 to 118 F. The patient changes his position frequently to enable the fluid to rinse all parts of the intestine holding it, even assuming the knee-chest position. Langenhagen uses a canula of red rubber 30 to 40 cm. long, with two holes at the tip, and repeats the procedure twice a week to every day. It has proved successful in his experience in four-fifths of all cases, and only a very few displayed evidences of intolerance.

51. **Dilution of Blood and Polyuria.**—Loeper remarks in the course of this study of the balance between the blood and urine that there are certain cases of Bright's disease which require treatment along the lines of heart affections rather than on a purely osmotic basis. Cardiovascular diuretics are indicated, and puncture will relieve the local edema in a serous cavity. When it occurs in a lung, venesection allows the extravasation to return to its place in the circulating current. Cases of polyuria due exclusively to the defective functioning of the kidneys are comparatively rare. In a large number the kidney, obeying the impulse of the blood, plays the same regulating rôle, maintaining the balance and the volume of the blood as in normal conditions. This form of polyuria may have various origins, but the disturbance in the blood is the inevitable intermediary between the first cause and the polyuria, so that the blood stage always precedes the renal stage.

53. **Artificial Abscesses in Intoxications.**—Fochier's turpentine fixation abscesses are not taken very seriously in France, as a rule, but Arnozan and Carles report some astonishingly favorable results from their application in a number of cases of typhoid fever, pneumonia, meningitis and malaria, apparently otherwise doomed. They have also tried these abscesses in experimental intoxications and announce that in the pus they were able to discover two, three and even four times as much of the toxic substance introduced, copper, lead or arsenic, as in the same weight of tissue elsewhere in the animal. Applying these findings to man they obtained very satisfactory results in several cases of intoxication from carbolic or oxalic acid or carbonic oxid.

Semaine Medicale, Paris.

56 (XXIII, 18.) De la leucytose dans l'appendicite. M. Casin and E. Gros.—"Extremely valuable sign when positive."
57 Letter from America: Procedé autoplastique pour l'ablation des cancroides des lèvres (on the lips). F. Munch.
58 Adrenalinized Vaselin. M. Mignon.—L'emploi de l'adrénaline sous forme de pommade en rhinologie.

59 Value of Guaiacolated Vaselin for Local Applications in Mumps. M. Ragazzi.—La valeur des applications de gaiacol dans le traitement des oreillons.
60 (No. 19.) Le syndrome asthmatique dans la grippe. O. de Oliveira.
61 Letter from America: Treatment of Mammary Cancer in the United States. F. Munch.
62 (No. 20.) Retraction of Ring of Bandl as Obstacle to Delivery in Breech Presentations. R. de Bovis.—La rétraction de l'anneau de Bandl, etc.
63 Letter from America: Sur les causes du shock chirurgical. F. Munch.
64 (No. 21.) *Le développement chirurgical d'une double circulation complémentaire dans le traitement de quelques maladies hépato-spléniques. B. Schiassi (Bologne).
65 Letter from America: La cure radicale de la hernie inguinale aux Etats-Unis. F. Munch.

64. Operative Treatment of Liver-Spleen Affections.—The success of the Talma operation for establishing collateral circulation in case of cirrhosis of the liver is now established, on condition that it is undertaken before the lesions in the liver have become irreparable or the heart and kidneys are too much impaired. The best effects are attained in non-alcoholic cirrhosis, and especially in that of splenic origin. When the spleen is involved, Schiassi thinks it is important to associate with the omentopexy, a similar operation on the spleen, and describes three cases thus treated, the patients cured for a year or so to date. He shows that there are in reality two portal veins, the mesenteric vein and the splenic vein, one draining the intestinal region, the other the spleen. By diverting a part of the blood in the spleen through the wall, the excessive blood pressure in the organ is relieved and the toxins elaborated in the spleen are diverted elsewhere instead of being swept directly into the liver. Still another advantage of such an intervention is that as the circulation in the spleen becomes more active, it aids in restoring conditions to normal, and the biochemical processes are more rapid and less harmful. He illustrates with eleven large cuts the various steps of his method of combined omento- and spleno-pexy to produce a double complementary circulation. The two parts of the operation can be done at separate times. The ideal would be to place the spleen between the muscles and the peritoneum, but as the organ is frequently too much enlarged for this, he resorts to intra-abdominal fixation of the spleen, inserting a wick above and below to promote the formation of adhesions and for drainage. He works through an extensive right-angled incision, drawing the omentum out through the horizontal incision in the peritoneum and turning it down over the latter, spreading it out over as large a surface as possible. The fixation of the spleen is done through a vertical incision, a large curved needle carrying stout catgut is passed through the parenchyma of the organ and through the muscles and fascia of each lip of the vertical leg of the primary incision, with eight or nine interrupted stitches. This omento-splenopexy is particularly indicated for cases of primary splenomegalia with cirrhosis of the liver—the Banti syndrome, also for malarial splenomegaly with cirrhosis of the liver. Fixation of the spleen alone might be found useful in cases of splenomegaly in which the liver is apparently not involved to any extent, as in the splenic anemia of adults and in that of children, in the preascitic stage of Banti's disease, and in the Popoff-Gilbert type of splenomegalic cirrhosis.

Archiv f. path. Anat., Phys. u. klin. Med. (Virchow's), Berlin.
Last indexed page 878.

66 (171, 1.) Ueber den retrograden Transport im Venen-System. J. Bouma (Utrecht).
67 *Hemangio-Endothelioma intravasculare uteri. P. N. Hansen (Copenhagen).
68 *Ueber Osteochondo-Sarkome der Thyreoidea. O. Funkenstein (Berne).
69 Zur Histogenese der melanotischen Hautgeschwülste (cutaneous tumors). E. Ravenna (Padua). One case. Tumor in anal region.
70 *Zur path. Anatomie der akuten Lymphämie. L. K. Gilinski (Cracow).
71 Experimental Inflammation of Striated Muscles. S. Saltykow (Groningen).—Ueber Entzündung der quergestreiften Muskeln.
72 *Calcification of Middle Coat of Arteries and Its Relation to Arteriosclerosis. J. G. Mönckeberg.—Ueber die reine Mediaverkalkung der Extremitätenarterien und ihr Verhalten zur Arteriosklerosis.
73 Bone Deformities in a Monkey. C. Davidsohn (Berlin).
74 (No. 2.) Blood-Plate Staining. G. Puchberger (Vienna).—Bemerkungen zur vitalen Färbung der Blutplättchen des Menschen mit Brillantkresylblau.
75 *Research on Fat in the Organism. J. Arnold (Heidelberg).—Ueber Fettansatz, Fettwanderung, Fettinfiltration und Fettdegeneration, Phagocytose, Metathese und Synthese.
76 Ueber Central-Körperchen in Gliomen. H. Lewy.
77 Destruction and Hyaline Degeneration of Malpighian Bodies. T. Tschistowitsch (St. Petersburg).—Die Verödung und hyal. Entartung der Malp. Körperchen der Niere.
78 4 Fälle von primäre Lungenaktinomykose. S. Kashiwamura (Berlin).
79 Fall von Aktinomykose der Lungen, der Leber und des Herzens beim Menschen. G. Fütterer (Chicago).
80 Fall von Sirenen-Bildung (Sympus apus). S. Abramow (Rostow).
81 Malformations of Tricuspid Valves. P. Geipel (Dresden).—Missbildungen der Tricuspedalis. Three cases.
82 *Intestinal Affections in Malaria. M. Glogner.—Darmerkrankungen bei Malaria.
83 Study of Causes of Multiple Births. W. Weinberg (Stuttgart).—Die Methode und Ergebnisse der Erforschung der Ursachen der Mehrlingsgeburten.
84 (No. 3.) *Formation and Retrogression of Gouty Tophi. E. Rindfleisch (Würzburg).—Ueber Bildung und Rückbildung gichtischer Tophi.
85 Case of Syphilis of Heart. K. E. Wagner (Kiev).—Fall von Syphilis des Herzens mit bedeutender Erweiterung der Arteria pulmonalis.
86 Ueber Fragmentation des Herz- und Skelett-Muskulatur und Kontinuitäts-Trennungen des elastischen Gewebes bei Beriberi, sowie über das Wesen dieser Krankheit. M. Glogner.
87 Fall von Rhabdomyom in einem veriagerten Hoden (in ectopic testicle). C. Benenati (Naples).
88 Epithelial Nodules on Testicles, Etc. R. Meyer.—Die subserösen Epithelknötchen an Tuben, Lig. latum, Hoden und Nebenhoden, Sogen. Keimepithel oder Nebennieren Knötchen.
89 Tuberculosis of Axillary Glands. H. Ebbinghaus (Zurich).—Isolirte regionäre Achseldrüsentuberkulose bei Tumoren der weiblichen Mamma, nebst Bemerkungen über die Genese der Milchdrüsentuberkulose.
90 Bakterien Befunde bei Leber-Abscessen. C. Davidsohn (Berlin).
91 *Ueber das Chlorom und seine Beziehungen zur Leukämie. T. Gümbel (Strasburg).
92 *Zur Pathologie der Diabetes mellitus. T. C. Janeway and H. Oertel (New York).

67. Uterine Intravascular Hemangio-Endothelioma.—Hansen claims that the case he describes is the first on record. The patient was a woman of 52, otherwise healthy. The tumor weighed 6,900 gm., and there were no metastases. It had grown rapidly, causing anemia and emaciation. In structure it was partly sarcomatous and not definitely circumscribed.

68. Osteochondrosarcoma of Thyroid.—Funkenstein has found records of 3 cases resembling the 2 which he describes in detail. A sarcomatous spindle-celled neoformation containing cartilage and bone substance developed in the strumously degenerated thyroid gland in elderly subjects. The tumors also contained a fibrillary and hyaline intercellular substance. In one of his cases there was benign metastasis in a lung and a pure sarcoma in one suprarenal in the other case.

70. Acute Lymphemia.—The first symptoms were lachrymation and sticking together of the lids noticed in the year-old infant. Exophthalmus soon developed with pallor, diarrhea, vomiting and the physical signs of leukemia. The proportion of white to red corpuscles was 1 to 5; hemoglobin 21 per cent. The lymphocytes numbered 94.4 per cent., with 5.3 neutrophiles. Death soon ensued and macroscopic circumvascular infiltrates were found in the epicardium, periosteum of the ribs and in the pia mater. Microscopic infiltration was discovered also at the points usually affected.

72. Calcification of Middle Coat of Arteries.—Mönckeberg examined 130 subjects to determine the frequency of this alteration of the arteries of the extremities, and its relation to arteriosclerosis. Instead of its being a rare occurrence, he found pure media calcification in 55, with or without arteriosclerosis of the deep-seated arteries, and in 18 the sclerosis involved the peripheral arteries also. In 57 there was pure arteriosclerosis alone. Thus the media calcification occurs more frequently than arteriosclerosis, and is evidently often mistaken for the latter. Its degree and extent are no criteria for or against accompanying arteriosclerosis of the central vessels, as either may occur alone. The femoral artery is the one most frequently involved and chiefly affected by the calcifying process, and is sometimes the only one. In 12 of his subjects no other vascular affection could be discovered. The age of his total material ranged from 47 to 79, and it included workingmen, clerks, sailors, artisans, etc., both indoor and outdoor workers. There were no special alcoholic or venereal antecedents except in 2 and no chronic bone affection in any. Smallpox, cholera, dysentery and malaria were noted in the history of one case each, cancer in 4 and tuberculosis in the same number.

75. **Fat Transformation, Degeneration, Etc.**—Arnold classifies lipogenesis as exogenous and endogenous. The exogenous includes the physiologic migration of fat particles, fat embolism, fatty infiltration, and pathologic metamorphosis of fat, simple and necrobiotic, that is, the intracellular formation of fat according to the principles of synthesis and of phagocytosis. The endogenous (albuminogenous) includes the intercellular formation of fat from breaking down of albumin, and fatty degeneration.

82. **Intestinal Affections in Malaria.**—Glogner occupies an official medical position in the Dutch East Indies, and seven years' experience has convinced him that the dysentery, diarrhea and other symptoms of the so-called tropical dysentery are in many instances due to the action of the malaria parasite and vanish on exhibition of quinin. This is especially likely to be the case when diarrhea occurs intermittently, the periodicity suggesting that of malaria, without fever. In other cases there may be muco-bloody stools, violent pains, spontaneous and on pressure, with tenesmus and emaciation, and yet quinin soon banishes the syndrome. Negative examination of the blood does not exclude malaria unless in presence of fever. In these atypical, intestinal forms the malarial plasmodia are rarely discovered in the blood and yet the regular intermittency of the manifestations and the prompt response to quinin certainly indicate a malarial affection.

84. **Retrogression of Tophi.**—Rindfleisch examined under the microscope a tophus removed from his own olecranon process. He found that the deposit of uric acid was surrounded by a row of polynuclear giant cells, evidently phagocytes, which under favorable conditions devour the particles of the uric acid, and thus reduce the size of the deposit. He believes that this phagocytic action is scarcely possible, except in very vascular regions.

91. **Relations of Chloroma to Leukemia.**—A young glassblower was admitted to the hospital with symptoms of transverse myelitis which proved fatal in a few weeks. The patient also presented the symptoms of acute lymphatic leukemia. The myelitis was caused by compression of the spinal cord by a large chloroma and similar tumors were found elsewhere in the periosteum and in close vicinity of the long bones, etc. Usually, the head and spine are exclusively affected, but sometimes the green lymphomata are located in the kidneys, lungs, mamma, testicles, broad ligaments, and as in the case described, in the urethra. The entire lymph apparatus and bone marrow exhibit hyperplasia, while the blood and mucosæ present the picture of acute lymphatic leukemia from which chloromatosis is only distinguished by the presence of the green tumors.

92. **Pathology of Diabetes.**—The case published by our American confrères was distinguished by the integrity of the pancreas while the gastrointestinal mucosa was in a condition of extreme atrophy with diffuse small-celled infiltration similar to what is observed in some cases of pernicious anemia.

Centralblatt f. Bakteriologie, Jena.

Last indexed page 879.

93 (XXXIII. 3.) Untersuchungen über Sarcinen, Streptococcus und Spirillen. D. Ellis (Marburg). (Commenced in No. 1.)

94 •Zur Epidemiologie des Typhus abdominalis. Tavel (Berne).

95 •Immunization of Animals Against Tsetse Fly Disease. Schilling.—Dritter Bericht über die Surrakrankheit der Rinder und Pferde im Schutzgebiete Togo.

96 Abortion Bacillus. Preisz (Budapest).—Der Bacillus des seuchenhaften Verwerfens. Found in one cow.

97 Experimentelle Untersuchungen über Bakterien-Antagonismus. L. A. Lode (Innsbruck).

98 A Study of a Hemolytic Complement Found in the Serum of the Rabbit. J. Edwin Sweet (Philadelphia).

99 Ueber das polyvalente Streptokokkenserum bereitet durch menschliche Streptokokkenstämme ohne Tierpassage. Tavel (Berne). Claim for priority.

100 Swine Pingue Serum. L. Deutsch (Budapest).—Beiträge zur Kenntniss des Schweinrothlaufserums.

101 Confirmation of Experimental Efficacy of Fowl Cholera Serum. F. H. Moster.—Wertbestimmung von Geflügelcholeraserum.

102 Beitrag zur Bekämpfung der Anopheles. D. Rivas (Nicaragua).

103 Staining of Actinomyces in Sections. S. Ciechanowski (Cracow).—Zur Technik der Aktinomycesfärbung in Schnitten.

104 •Zur Gonokokkenfärbung (staining). A. v. Wahl (St. Petersburg).

94. **Epidemiology of Typhoid.**—In the recurrence of an epidemic of typhoid fever at Berne the proof was afforded that under certain conditions, as in standing water, typhoid bacilli may remain alive and retain their propagating and virulent qualities unchanged for several months.

95. **Principles of Immunization Against the Tsetse Fly Disease.**—Schilling thinks that the principles of successful immunization against the surra or tsetse fly disease are now thoroughly established. The property possessed by the parasite of adapting itself to its temporary host, may be utilized to attenuate its virulence for a certain species.

104. **Rapid and Effective Stain for the Gonococcus.**—Wahl thinks that he has solved the problem of producing a stain which keeps perfectly, stains the gonococci dark and the elements of the secretions another and lighter color, while the results are complete in five to fifteen seconds. He mixes 2 c.c. of a concentrated alcoholic solution of auramin with 1.5 c.c of 95 per cent. alcohol; 2 c.c. of a concentrated alcoholic solution of thionin; 3 c.c. of a concentrated aqueous solution of methyl green, and 6 c.c. of water. It is ready for use at once, and has kept unchanged for a year.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

105 (No. 21.) •Ueber Hemisystolie. E. v. Leyden.

106 •Tuberkulose des lymphatischen Apparates. E. Hitschmann and O. Stross (Vienna).

107 Verhalten der grossen mononuklearen Leucocyten und der Uebergangsformen (Ehrlich) bei Carcinoma ventriculi. Korpjuweit (Königsberg).

108 •Die Prognose der Herz-Arrhythmie. E. Rehfisch (Berlin). (Commenced in No. 20.)

109 Ear Speculum with Adjustable Lens. Bergemann (Husum).—Ohrspekulum mit stellbarer Lupe.

110 Oil Treatment of Cholelithiasis. Flaser.—Oelbehandlung der Chol. One case. Cure.

105. **Hemisystolia.**—As long ago as 1868 von Leyden described a case of what he called hemisystolia, non-synchronous contraction of the two ventricles. His assertions were disputed and he confesses that he has never seen but two cases since, and these not so marked as his first, which was reported in detail in *Virchow's Archiv* for that year, xliv, p. 365. The left ventricle contracted first without any perceptible participation of the right, and then the right without the participation of the left. It is a very rare phenomenon, and he is convinced that it never occurs except after large doses of digitalis. Openchowski has demonstrated on animals that the left heart beats nearly one-half slower than the right after injection of helleborin or digitalis, and is inclined to regard the right ventricle as immune to the action of these drugs. In a number of cases of mitral stenosis with dilatation of the right ventricle, von Leyden has noticed that digitalis had very little effect, and assumes that the thicker musculature is the reason why it acts more on the left ventricle than on the right. Broadbent, in his recent work, refers to the "supplementary systole of the right ventricle induced by digitalis." The phenomenon of hemisystolia is, therefore, being given more credence as time passes by physiologists and clinicians.

106. **Tuberculosis of Lymph Apparatus.**—The case reported was similar to that described by Sternberg in the *Ztft. f. Heilkunde*, 1898, xix, as a peculiar tuberculous affection of the lymphatic apparatus with the clinical picture of pseudoleukemia. The patient was a man, a hair dresser, 28 years old, who had suffered from dysentery during military service in the tropics, also from malaria and recurring phlegmonous throat affections. The first symptoms were pains in the left arm and enlargement of the glands in neck and axilla, followed by night sweats and fever. The glandular affection and pains spread to involve other regions, the spleen and liver became hypertrophied with marked emaciation and general edema. The intensity of the pains required the continuous use of morphin, and the patient died in cachexia about fifteen months from the first symptoms. Pus was sometimes found in the sputa, but no tubercle bacilli. The blood count showed 10,000 leucocytes at first, but a polynuclear leucocytosis to 42,000 suddenly developed. Tubercle bacilli were found in the lymph glands and spleen and typical tubercles in the latter and in the liver. No evidence of what Sternberg styled "transitional processes of mercly inflamed parts into tuberculous tissue" was discovered.

108. Prognosis of Cardiac Arrhythmia.—Rehfisch refers to the fact that the functional activity of the heart is the product of its three inherent factors: its automatic excitability, the reaction to this excitability, that is, its power of conducting the stimulus, and lastly, its power of contraction. When any one of these factors is altered, arrhythmia in some form follows, and the prognosis depends on which of the factors is involved. In cases of abnormal excitability, shown in the extrasystole, which is the evidence of a disproportion between the power of the heart and the task required of it at the moment, the prognosis depends on the fundamental affection causing the extra excitability. This is usually arteriosclerosis, organic heart disease or pure nervousness. Knoll, by augmenting the resistance in the arteries, was able to elicit the extrasystole in his experimental research, similarly to what is observed in arteriosclerosis, either diffuse or of the coronary alone. The extra resistance imposes extra work on the heart, and this is followed by extra excitability. Nervous subjects come under this same law, as emotions are accompanied by variations in the blood pressure, which make extra demands on the heart and entail extra excitability and the extra systole. If arteriosclerosis and excessive nervousness can be excluded, then the extra systole is an evidence of organic heart affection, and hence its prognosis is grave, otherwise not. Of great importance in this case is the duration of the compensatory interval of rest, as he describes in detail with various pulse curves. The second factor in the cardiac function, the conductibility of the impulse, may be impaired by defective conductibility in the so-called block fibers, the muscular fibers connecting the atrium and the ventricle, which retain their embryonal type more than the others, and do not pass the impulse on so rapidly as the latter. They also are the ones to suffer first from any injury and if much degenerated, are able to arrest the impulse entirely, thus producing the "block heart." The distinguishing sign of disturbance in the conductibility is that the duration of one interval is always less than that of two pulse periods, and that the period following the interval is always longer than the second one. The irregular pulse of nervous and neurasthenic subjects is characterized by the grouping of the pulse beats. From 72 the pulse may jump to 96, but it never changes to a multiple of itself, a pulse of 48 does not follow one of 96, as in case of severe organic heart disease. In the missing pulse of nervous subjects the duration of the interval is much less than that of two pulse periods and seldom surpasses 60 per cent. of a pulse period. In case of acute infectious diseases the heart rallies all its energies and works with its utmost strength so that pulsus deficiens is not observed during the climax of the disease, but after the acute stage is past, then the heart relaxes its efforts, and we can then determine to what extent it has been impaired by the stress it has undergone, and the action of toxins, and what its loss in effective muscle substance and cell energy. If normal conditions are restored, the pulse will become normal also, but as long as the pulsus deficiens lasts it should be carefully supervised by the physician and the prognosis is not good. The prognosis of arrhythmia due to enfeebled contracting power is grave. Rehfisch states that he knows of only one case of pure pulsus alternans. This was published by Riegel, and he reproduces the curve.

Klinisch-Therapeutische Wochenschrift, Vienna.

Last indexed page 1371.

111 (X. 13-14.) *Autoserotherapy in Pleuritis. N. F. Tschigaeff (St. Petersburg).—Die Behandlung der serös-fibrinösen Pleuritis mittels subkutaner Injektionen pleuritischer Flüssigkeit. (Commenced in No. 12.)

112 Value of Protargol in Gonorrhea. Hirschl (Prague).—Ueber die Behandlung der gon. Vulvovaginitis.

113 Megalophthalmus und Hydrophthalmus in einer Familie. M. Bondi.

114 Blood-Pressure Reducing Action of Peat Baths. A. Loebel (Dorna).—Die Blutdruckreduzierenden Werte der Moorbäder.

115 (Nos. 15-16.) Die diagnostische Bedeutung der Pupillen-Reaktion. O. Marburg (Vienna).

116 Pulverized Metals for Surgery. A. Strauss.—Das Epithiol-Gold und Epithiol-Silber in der Chirurgie und Dermatologie.

117 Hydrotherapy in After-Treatment of Respiratory Affections in Children. S. Behrmann.—Ueber die Verwendung des kühlen, warmen und heissen Wassers zur Nachbehandlung der Erkrankungen der Respirationsorgane im Kindesalter. Zur Prophylaxie der Tuberkulose und der Meningitis tuberculosa.

119 (Nos. 17-18.) Dislocation of Abdominal Organs from Lacing. N. Zuckor (Franzensbad).—Dislokation der Bauchorgane der Frau als schädliche Folge des Schnürens.

120 (Nos. 19-20.) *The Struggle and the Immunization of the Organism Against Tuberculosis. E. Maragliano (Genoa).—Der Kampf und die Immunisierung des Org. gegen Tub.

121 Ueber die operative Behandlung des Uterus-Carcinoms. J. Hausman (Pawlik's clinic, Prague). (Commenced in No. 17.)

122 Infectious Diseases in Austria and Prussia by Age and Sex. S. Rosenfeld.—Die Infektionskrankheiten in Oesterreich und Preussen nach Alter und Geschlecht. (Commenced in No. 18.)

123 (No. 21.) Ueber epileptische Traumzustände. Epilepsia rotatoria und die Beziehungen zwischen Rinden- und genuiner Epilepsie. A. Pick (Prague).

124 Die Serumtherapie des Abdominal-Typhus bei Kindern. A. Josias. Address at Madrid Congress.

125 (No. 22.) Suicide in Syphilis. A. Fournier.—Ueber Selbstmord bei Syph.

126 Hydrotherapy. W. Rosenfeld.—Zur Heisswasserbehandlung in der Gynäkologie.

111. Autoserotherapy in Pleurisy.—Gilbert's method of treating pleuritis by injecting some of the fluid derived by aspiration from the pleura was tried by Tschigaeff in 9 cases. In all the effusion ceased to increase after the injection and immediate absorption commenced. Acute serofibrinous pleuritis treated in this way was cured in about two weeks on an average. The earlier the injection was made, the prompter the recovery. No reaction to the injections occurred in cases of rheumatic origin, while in those due to tuberculosis there was always a brief febrile reaction. He describes a few typical cases in detail. One recovered after one injection, another required two, and a third four. The patients were from 18 to 66 years of age in these published cases. He aspirated about 5 c.c. of the serofibrinous effusion and reinjected subcutaneously 1 or 2 c.c. of it in the scapular region. No other treatment seems to have been instituted and the effusion was rapidly absorbed.

120. Immunization Against Tuberculosis.—Maragliano, in this address, delivered at the Madrid Congress, confirmed Behring's assertions in regard to the possibility of inducing passive immunization by means of the milk of immunized cows. He states that he has been experimenting in this line for five years, and has been able to isolate the protecting substance in the milk of the cows, although in small amounts, and has also established that antitoxin taken into the digestive tract is absorbed and displays its protective action on animals and man as when injected. Passive immunization can thus be realized by injection or ingestion of antitoxin. The antitoxic substances are found not only in the milk and blood but also in the meat of immunized animals. He proclaims that when a tuberculous focus anywhere on the body has completely healed, the individual is usually thereafter immune to tuberculosis. In families in which tuberculosis prevails, those members usually escape who have had a tuberculous joint or cutaneous affection or tuberculous focus elsewhere, from which they have completely recovered. When an individual has completely recovered from a local tuberculous affection, as a rule, he is therefore immune. Maragliano denounces the injection of living bacilli, no matter how attenuated, as dangerous, and contends that Behring is wrong when he asserts that active immunization is not possible save with living cultures. He has succeeded in inducing active immunity by injection of the tuberculous toxin alone, and has effectually induced the production of antitoxin and agglutination by this means. As early as 1891 he proclaimed that the action of Koch's old tuberculin was probably due to the elaboration of protecting substances in the body which it induced, and all his experimental and clinical research since has only confirmed this view. He has tried the tuberculin test again and again on some of his patients whom he has cured of tuberculosis with serum from immunized animals, and the results have always shown that the cure was complete during seven years' experience. None of his patients have changed their environment, one is a physician who continues his practice, constantly exposed to new infection. Maragliano is now engaged in the attempt to produce a tuberculous focus which will confer active immunity after healing, without the use of living cultures. He has been eminently successful on animals and has repeatedly induced an inflammatory tuberculous focus at the periphery with a mate-

rial which he does not describe more fully. Applying the results to man, he has been able to induce the production of agglutination and pronounced leucocytosis, the same as observed in animals, although in the clinic the crucial test of inoculation with tuberculosis is out of the question. He makes the artificial focus on the arm and a small inflammatory lesion develops, with sterile pus, and three days of fever, which then subsides and heals.

Muenchener Med. Wochenschrift, Munich.

127 (No. 17.) Determination of Total Indol Elimination. A. Schmidt (Dresden).—Ueber den Nachweis und die Bestimmung des Indols in den Fäzes mittels der Erlich'schen Dimethylamidobenzaldehyd-Reaction.

128 Ibid. R. Baumstark.—Bestimmungen der Fäulnisprodukte im Urin und in den Fäzes mit Benutzung der Ehrlich'schen Aldehyd-Reaktion.

129 *Lenkocytose bei Perityphlitis. H. Goetjes (Berlin).

130 Points in Which I Differ from Riedel in Regard to Gallstone Surgery. H. Kehr.—In welchen Punkten ich von Riedels Ansichten über Gallensteinchirurgie abweiche.

131 Recovery After Subcutaneous Contusion of Kidney. G. Schmidt.—2 Faile von subk. Nierenquetschung mit günstigem Ausgang.

132 *Principles for Treatment of Abdominal Contusions. F. Fraenkel (Nuremberg).—Einige Grundsatze fur die Beurtellung und Behandlung der Kontusionen des Bauches.

133 Bullet Wounds of Brain. Wieting (Constantinople).—Zur Frage der Geschossextraktion aus dem Gehirn bei penetrierenden Schädelschüssen.

134 *Ueber gummöse Syphilis der Mamma. J. Heller.

135 Lamp for Transilluminationof the Eye. M. Sachs (Vienna).—Neue Durchleuchtungslampe und Ihre Verwendung in der Augenheilkunde.

136 Improved Dropper for Sterilizing Eye Fluids. Mohr (Düsseldorf).—Verbessertes Tropfglas zur Sterilisierung von Augenflüssigkeiten.

137 Zu J. Wallichs' 50-jährigem Doktor-Jubiläum. Henop.

138 (No. 18.) *Early Recurrence of Fibrinous Pneumonia. W. Ebstein (Göttingen).—Frührezidive bei der fibrinösen Lungenentzündung.

139 Immune Bodies. K. Landsteiner.—Ueber die Verbindungen und die Entstehung von Immunkörpern.

140 Arrested Development of Kidneys. E. Meyer.—Ueber einige Entwicklungshemmungen der Niere.

141 Aetiologie des Esophagus-Carcinoms. P. Wolf (Dresden).

142 Bilateral Abducent and Sideward Glance Paralysis. Seggel.—Doppelseitige Abduzens- und seitliche Blicklähmung.

143 *Recurring Oculomotor Paralysis. T. Schilling.—Zur Frage der rezidivierenden Okulomotoriuslähmung.

144 *Prevention of Closing of Nostrils During Inspiration. K. M. Menzel.—Zur Behandlung der Nasenflügelansaugung.

145 Anthrasol, ein gereinigter, farbloser Teer (cleansed, colorless tar) und seine therapeutische Anwendung. A. Sack (Heidelberg).

146 *Hyperemia as a Therapeutic Measure. A. Bier.—Hyperemie als Heilmittel.

147 Improved Technic of Intubation. F. Cuno (Frankfurt a. M.).—Fixierte Tuben und Bolzenkanülen bei erschwertem Dekanülement.

148 (No. 19.) *Diagnostic Experience with Tuberculin. Freymuth (Breslau).—Diag. Erfahrungen mit Tub. zu Lungenkranken.

149 Explanation of Favorable Influence of Bed Rest on Fever in Phthisis. Pfeiffer (Berlin).—Zur Erklärung, etc. Ascribes it to hyperemia induced in lungs.

150 Study of Results of Sanatorium Treatment of Pulmonary Affections. W. Ambrosius (Hanau).—Erfolge der Heilstättenbehandlung bei lungenkranken Mitgliedern zweier Krankenkassen.

151 Ibid. F. Wolff (Reiboldsgrün).—Zur Heilstättenbehandlungen, etc.

152 Ibid. G. Liebe (Waldhof Elgershausen).—Die Bedeutung der Heilstätten.

153 Exaggerations in Medicine. M. Karger.—Uebertreibungen in der Medicin.

154 Digestion Vacuoles. Spirias (Athens).—Ueber Verdauungsvakuolen und ihre Beziehungen zu den Foa-Pfimmerschen Krebs-Parasiten.

129. **Leucocytosis in Appendicitis.**—In examination of 40 patients with inflammation of the cecum Goetjes found that leucocytosis of 20,000 to 30,000 in appendicitis was the invariable index of a circumscribed suppurative process unless due to some complication. In case of diffuse peritonitis the blood count has no regular differentiating value except that high leucocytosis indicates a better prognosis.

132. **Abdominal Contusions.**—In distinguishing between a mere contusion and one accompanied by injury of some internal organ, Fraenkel emphasizes that the amount of shock is not always in proportion to the severity of the injury but that shock prolonged for more than six hours speaks for injury of some viscus. As the temperature is lowered in shock it is no criterion of the harm done at first, but a slight rise is an important indication of the escape of fecal masses or of accumulation of blood, bile or urine in the abdominal cavity, the temperature continuing to rise gradually. If the temperature taken hourly in the rectum is above normal and constantly rising, a severe internal injury can be assumed. The pulse is affected by the shock, but if it continues bad for hours and grows worse, an internal injury may be accepted. If vomiting occurs immediately it has no differentiating value, but if it first appears a few hours after the injury it indicates internal damage. But this tardy vomiting does not always accompany internal injury and to wait for it is to allow time for peritonitis to develop. Vomiting of blood indicates almost always gastric hemorrhage. The aspect of the abdominal walls is not conclusive, except the contraction. The abdomen may be drawn in like a crater. Meteorism is a symptom of commencing peritonitis. The abdomen contracts to rest the intestines, and this phenomenon is seldom absent in case of internal laceration of an internal organ. Pain is another important symptom, spontaneous or on pressure, localized or general throughout the abdomen. When it constantly increases in intensity it speaks for internal injury, but is not its inevitable accompaniment. The pain radiates to the shoulder in case of injury to liver and spleen. Percussion of the abdomen may reveal an exudate at once, but a small one in the lower pelvis is best discovered by palpation through the rectum, which should never be neglected. The disappearance of the liver dulness is also a valuable sign, as it indicates the escape of gases from the intestines or displacement of the liver by increasing meteorism. None of these signs are pathognomonic, and the examination should be repeated from hour to hour by the same person. The patient should be taken to a hospital or clinic on suspicion of severe abdominal injury, and everything prepared for an operation once the diagnosis is assured, although it may not be needed. In the meantime absolute repose and total abstinence. Opiates should not be given during this period of observation, nor stimulants nor saline infusion. They all mask the true diagnosis. Camphor may sometimes be required in severe shock. The exploratory laparotomy should be a short incision in the median line under infiltration anesthesia. It can be enlarged as necessary under "ether drop" narcosis, which Fraenkel prefers in these cases, with an incision from the ensiform process to the symphysis, sometimes supplemented with transverse incisions, to enable all the injured points to be discovered and rapidly treated. Time saved is so much vital energy saved. Unless it is possible to flush the cavity with 20 to 30 liters of saline infusion or sterile water he prefers to refrain and sponge it dry. Recovery depends mainly on the after-treatment in many cases. Saline infusion here asserts its rights. Petry has reported 55 per cent. recoveries in those operated on within twelve hours, and 33 per cent. of those operated on in a few days, his statistics comprising 42 cases. Fraenkel has seen 17 recover out of 31 operated on within three days. In 30 cases of laceration of the spleen, 16 recovered after operation. The total statistics show that 50 per cent. were cured, and a large number were very severe, otherwise doomed cases.

134. **Syphilitic Gummata of the Mamma.**—Heller started to remove a large supposed cancer of the mamma in a woman in the tertiary stage of syphilis, but after opening into the tumor found that it was a gumma, and refrained. He has collected nearly 50 similar cases of gumma in the mamma in the literature, but can not find one in which the tumor was retromammary as in his case. All were cured in a few weeks by exhibition of potassium iodid.

138. **Early Recurrence of Fibrinous Pneumonia.**—Ebstein refers to the relative frequency with which pneumonia recurs later in the same individual, as compared to typhoid. The cases of early recurrence of pneumonia are much rarer, but in his forty-three years' experience he has encountered one which he describes in detail. A young man convalescing from fibrinous pneumonia affecting the lower right lobe had seven days free from fever, after which the temperature rose again to its former height and there was evidently a new infection, a new pneumonia, affecting the same lobe and terminating in convalescence as before after four or five days. He reviews the literature in regard to what he calls "tardy recurrence," and states that 81 patients out of 438 cases of fibrinous pneumonia at Göttingen had pneumonia recur later from two to eleven times. Rush still heads the list, however, with his patient who had pneumonia twenty-eight times. Wagner ob-

served 2 cases of "early recurrence" in 110 cases, and 2 occurred at the Berlin Charité in 440 cases of pneumonia. Grisolle stated that one-twenty-eighth of all his cases had these early recurrences, which he called relapses. One patient had three, and Binz has reported a case with two. A few other cases have been published, including 2 reported by Osler. In Ebstein's experience with typhoid fever he has observed 13 cases of recurrence in 300 cases of ordinary typhoid, and 1 in 600 of the exanthematous form. He cites in conclusion as a curiosity Diemerbroeck's observation of a family of 4 children from 8 to 14 who all had an early recurrence of smallpox directly after convalescing from the primary attack.

143. **Recurring Oculomotor Paralysis.**—Schilling relates a case in which this paralysis appeared first at the eighth year and then recurred now and then during the seven and a half years to date, the intermissions growing shorter as time passed and the attacks less severe. Each was accompanied by pains in the forehead and temple on the same side as the paralysis, vomiting and great depression. There were no symptoms of migraine during the intervals and no history of migraine in the family. There was paresis during the intervals of the paralysis between the attacks. He suggests as an explanation a congenital weakness of the nerve involved, which is overcome by the accumulation of metabolic toxins. This assumption is sustained by the fact that the patient stutters, and also by the discovery of a field of medullated fibers in the fundus of the eye on the side affected.

144. **Treatment of Sucking in of Nostrils During Inspiration.**—Menzel has found paraffin prothesis a complete relief for this condition.

146. **Hyperemia as a Therapeutic Measure.**—This article is merely a detailed review of the large book on the subject recently published by A. Bier of Greifswald, dedicated to Esmarch. It is the work of a skilful surgeon, who brought the light of his experience to bear on physiologic and pathologic processes and was able to discover some entirely new standpoints for therapeutics and to supply the scientific basis for a number of empirically established facts. He regards superheated air as the best measure for inducing active hyperemia, and a moderately tight rubber band as the best for the passive. If the band is too tight the cold congestion that ensues is a very dangerous condition. There should be no pain in this form of therapeutic hyperemia. In tuberculosis he advocates interrupted passive hyperemia with long pauses. He has found the Junod boot effective, made of glass. He is inclined to attribute the efficacy of derivation to the hyperemization of the part which it induces, and believes that the application of ice has a similar effect. His results agree with the modern theory that absorption occurs through the blood capillaries and not, as formerly supposed, through the lymph. He devotes considerable space to a review of the facts in regard to the hypertrophy of the part induced by active hyperemia, and shows that it is not a delusion but a fact, and may prove useful in aiding regeneration of parts. The bones frequently grow both in length and thickness, the epithelium proliferates and the connective tissue increases under the influence of both active and passive hyperemia. The effect of passive congestion is usually magical in gonorrheal joint affections, as in arthropathies of various kinds. Induced hyperemia is also effectual in the treatment of neuralgias and for promoting absorption in elephantiasis, effusions in the joints and extravasations, etc. Bier's various works have been reviewed in THE JOURNAL as published from time to time. His extensive experience has suggested a number of technical points to seek or avoid, which he enumerates, and has shown that the simplest apparatus is as effective as the most complicated.

148. **Tuberculin in Early Diagnosis of Pulmonary Affections.**—Freymuth considers Koch's old tuberculin as the most reliable, but places the limit of non-febrile temperature a little higher than Koch, 37.1 to 37.2 C. He commences with 1 mg. If there is no trace of a reaction he then injects 5 mg., in case of a suggestion of a reaction, only 3 mg. If a third injection is necessary, the amount is 5 mg., or in rare cases 8 mg. The reaction curve shows a very steep ascent after a small single dose, or a slight ascent after the first small dose and a steep ascent after the second. The first curve is the expression of quite recent infection. The second one is more frequent. Still another curve is observed in case of recent but very mild infection. There is no reaction to the small and medium dose, but the third induces a steep rise. He reviews his experience with 170 patients thus tested. He mentions that the sputa, after injection of tuberculin, frequently contain tubercle bacilli not discoverable before. The tuberculin test was particularly useful in a group of 17 cases in which chlorosis masked the tuberculosis. The patients were young women or girls and the lung findings were trivial, with very little expectoration. They all reacted strikingly to tuberculin and yet the few clinical signs of tuberculosis, merely slight roughness in breathing and minimal decrease in the resonance, were so insignificant that the idea of tuberculosis scarcely suggested itself. Chlorosis alone does not react to tuberculin. Those cases are suspicious in which the general health is much impaired with comparatively slight diminution in hemoglobin, and those which iron fails to benefit. In all the cases of tuberculosis which reacted positively to the test the infection was recent or active. In more chronic benign, smouldering or healed infection the test was frequently negative. The same occurs with the imperfectly healed or stationary cases. His experience seems to demonstrate that the reaction is more powerful the shorter the interval since infection, before the organism has had time to elaborate any immunizing substance against it. In diagnosing, a negative result may signify no tuberculosis, but does not inevitably exclude it. Its chief importance is for the diagnosis of incipient tuberculosis when all other means have failed to disclose it.

Therapeutische Monatshefte, Berlin.

Last indexed page 1546.

155 (No. 5.) The Limits of Normal Temperature. E. Franck.—Temperaturmessung und Fiebergrenze.

156 The Rudolph Spring at Marienbad. E. H. Kisch.—Die Rudolfsquelle in M.

157 Zur Behandlung der motorischen Aphasie und Agraphie nach apoplektischem Insult. H. Stadelmann.

158 New Esophagus Syringe. F. Schilling (Leipsic).—Eine neue Esophagusspritze.

159 A "Safety Pessary." A. Rahn.—Ein Sicherheitspessar mit Benutzung des Schatz'schen Ringes.

Zeitschrift f. diet. u. physik. Therapie, Berlin.

Last indexed page 477.

160 (VI. 10.) *Hygiene-Therapie der Syphilis. F. Block (Hanover).

161 The First Five Years of the "Zeitschrift." J. Marcuse.—Ein Rückblick.

162 New Technic for Making Bread for Diabetics. W. Bauermeister.—Ueber die Verwendung des Kaseins zu Backzwecken vermittels einen neuen Technik und über Diabetesbrote im allgemeinen, wie über das nach obiger Methode hergestellte (Salus-) Fabrikat im bes.

163 Hot Air Therapy. E. Rautenberg (Königsberg).—Zur Heissluftbehandlung. (Commenced in No. 9.)

164 Seasickness and Deep Breathing. F. Pavacini.—Seekrankheit und Tiefathmen.

165 Die Bedeutung der Precipitin-Reaction für die Ernährungstherapie (for dietetic treatment). L. Michaelis (Kiel).

166 (No. 11.) *Apparatus for Constant Heat, Especially in Cutaneous and Venereal Affections. K. Ullmann (Vienna).—Hydrothermoregulator.

167 Die klimatischen Kur-Orte. W. Velten (Bonn).

168 Value of Levulose in Children's Dietary. L. Fürst.—Die Bedeutung der Levulose für die Kinderdietetik.

169 Die Serum-Therapie der Streptokokken-Infektion. F. Meyer. Historical sketch; 52 articles on subject reviewed.

170 (No. 12.) Die Arbeit mit dem Hematokriten von H. Köppe. F. Engelmann.

171 *A Predecessor of Brand. J. Sadger.—Ein Vorgänger Brands.

172 *Abortiv-Behandlung der Furunkulose mittels überhitzter trockener Luft (with dry hot air). N. Reich (Budapest).

173 Latest Russian Works on Hypnosis. A. Dworetzky.—Ueber einige russische Arbeiten aus dem Gebiete der Hypnose.

174 (VII. 1-2.) Diet for Kidney Patients. P. K. Pel (Amsterdam).—Die Ernährung unserer Nierenkranken.

175 *Massage in Treatment of Affections of Testicles and Their Adnexa. J. Zabludowsky.—Zur Therapie der Erkr. der Hoden und deren Adnexe.

176 Excretion of Urine After Ingestion of Fluids. J. Glax (Abbazia).—Ueber das Verhältniss der Harnausscheidung zu den aufgenommenen Flüssigkeiten bei Gesunden und Kranken. Ibid. F. Tripold. The latter reports results of thirty months of auto-observation.

177 *Ueber Aronson's Streptokokkenserum. F. Meyer.

178 *Die spezifische Typhusbehandlung. H. A. Namann.

179 *Das neue Institut für physikalische Therapie in Rom. J. Marcuse (Manheim).

180 Experiments in Feeding Mice with Highly Sterilized Cow's Milk. A. Keller.—Fütterungsversuche, etc.

181 Influence of Mineral Waters on Composition of Blood. H. Dünschmann.—Ueber den Einfluss der Mineralwässer auf die Blutbeschaffenheit.
182 Full Report of First Annual German Preventive Congress, Frankfurt, March 9-10.

160. **Hygiene in Syphilis.**—Block believes that the syphilitic toxin exerts its injurious influence on the vessel walls and nervous system from the very start, the effects resembling those of dissipation, over-exertion or chronic alcoholism. The nervous system is already predisposed by the stress of our strenuous life. In a less complex civilization the nervous system is not predisposed and offers more resistance, and is consequently not affected to the same extent. All the causes which tend to lower the resistance of the nervous system should be guarded against. The patient should be instructed to retire early. The food should be nourishing with milk in abundance. Alcohol predisposes to the severer forms of the disease and both alcohol and tobacco should be used in moderation or abandoned. Syphilitics like to read about the disease, and thus fall an easy prey to charlatans. To meet this craving Block has written a pamphlet, requesting them to refrain from reading other works on the subject. He insists on the patients returning at certain intervals for inspection, and reiteration of the warnings, etc., endeavoring to combat the depression, neurasthenia and mild hypochondria so liable to accompany the disease. A course of mineral waters may be useful, but under other circumstances he advises continuing at business. The patient should be instructed that a body once invaded by syphilis is thereafter less resistant, especially in the nervous and vascular systems, and although he can live a normal life, like other persons, yet he must keep within the bounds of a rational mode of life and abjure excesses of all kinds.

166. **The Hydro-Thermo-Regulator.**—Ullmann's coils of pipe or rubber tubing sewed flat on a sheet of asbestos or duck, with a continuous current of hot or cold water through them, have been described in these columns. This present article is elaborately illustrated.

171. **The Inventor of the Brand Bath.**—Sadger claims for a German physician, Dr. Pingler, the priority for the exclusive treatment of typhoid fever with cold water. He reported, in 1850, 26 cases thus treated, the mortality reduced to 7.6 per cent.

172. **Abortive Treatment of Furuncles with Dry Hot Air.**—Reich was impressed with the efficacy of this application in the abortion of 4 cases of incipient furuncles. None came to suppuration or necrosis. He thinks that if we restrict this "thermo-aerophor treatment," as he calls it, to true furuncles, and do not attempt to apply it in cases of deep-seated cellulitis or too late in the affection, we will never experience a failure.

175. **Physical Therapeutics for Affections of Testicles and Their Adnexa.**—Zabludowsky is in charge of the Berlin University Institute for Physico-Therapy and his report of the benefits derived from these measures has appeared in a number of our foreign exchanges, both French and German. The present article is copiously illustrated, and gives detailed directions for massage of the testicles, seminal cords, perineum and adjacent muscles, for cases of lingering inflammation of these parts of traumatic or gonorrheal origin, atrophy and functional disorders associated with nervous or psychic symptoms.

177. **Aronson's Streptococcus Serum.**—Meyer has used this serum in 18 cases, and states that the results were brilliantly successful in 3 cases of erysipelas, one of bilateral tonsillitis and one of severe puerperal infection. On the other hand, in several others the results were dubious, and in 2 others of erysipelas, 2 of scarlet fever, and 6 of septicemia, the results were entirely negative. The 5 successes encourage further trials and attempts to learn the reason for its failure in the other cases.

178. **Specific Treatment of Typhoid.**—Nammann has been able to collect 141 works on this subject. The general conclusions are favorable.

179. **The Rome Institute for Physical Therapeutics.**—Marcuse writes in longing envy of the beautiful and commodious model institute recently completed at Rome. The first floor is fitted up in classic style in imitation of the hot baths of the ancients, a most successful combination of the old Roman and Pompeiian baths, with modern comfort. The heating apparatus is beneath the floor, as in the ancient baths. The second floor is fitted up with the usual appliances of such an institution, with an amphitheater for teaching purposes, as the institution is affiliated with the university.

Gazzetta degli Ospedali, Milan.

Last indexed page 1766.

183 (XXIV, 35.) Contributo alla teoria infettiva del rachitismo. A. Amantini.
184 Contributo alla cura dell'ernia crurale strozzata. R. Penzo.
185 L'estratta antilifico "Jez" in 2 casi gravissimi di "ileo-tifo." G. Casardi.
186 La cura della gonorrea col massagio prostatico. P. Adolfo.
187 Hernia in Respect to Industrial Accidents. G. Egisto and B. Luigi.—L'ernia in rapporto colla legge sugli infortuni del lavoro.
188 (No. 38.) *Graphic Determination of Renal Functioning. S. Mircoli.—Forma di lavoro renale, sua grafica e significato.
189 Contributo allo studio del cancro della mammella. L. Baldassarri.
190 Influence of Innervation on Healing of Fractures. R. Penzo. —Influenza dell' innervazione sulla guarigione delle fratture. Experimental.
191 Four Cases of Alopecia of Dental Origin. Gravagna.—Pelade d'origine dentaria.
192 La digitale ad alte dosi nella cura della polmonite lobare. P. Monetti.
192½ (No. 41.) *Sugli effetti della palpazione renale. G. P. Morano (Galvagni's clinic, Modena).
193 Cura radicale della fistola intestinale e dell'ano preternaturale. G. C. Vinci (Messina).
194 Sulla presenza del Nucleone nella sperma e nel vitreo. E. Cavazzani.
195 2 casi di Tetano curato e guarito col metodo Baccelli. P. A. Corte.
196 Injections of Hydrogen Dioxid in Broncho-pneumonia in Infants. B. Romano.—La broncopolmonite da influenza nei bambini e l'uso delle inlegioni di acqua ossigenata nel periodo di asfissia.

188. **Graphic Tracings of Kidney Functioning.**—Mircoli proclaims that very important information may be obtained from study of the specific gravity of the urine determined at different hours during the day. His research shows that the curve of the volume of water runs parallel to the curve of the specific gravity at different hours in normal subjects, but in case of kidney affections there is no parallelism and the kidney functions show various other aberrations. Among these is the absence of the normal diminuendo in kidney functioning observed during sleep. It seems as if in health the kidney slumbered also, while in case of a pathologic organ it may be functioning most intensely during sleep. The kidney, in comparison with the normal organ, behaves like a heart with tachycardia one-quarter and bradycardia three-quarters of every hour, or like a clock that gains time during the first quarter, but loses enough during the rest of the hour to nearly make it up or lose more. He has found the most convenient formula for this determination of renal functioning to be the specific gravity, computed for 1 c.c. of urine, multiplied by the number of centimeters of urine voided at all the natural urinations, this product divided by the number of hours. The result indicates the work actually done by the kidney and by determining it at various hours in the day a characteristic curve is obtained which will afford insight into the relations between renal functioning and the meals, exercise, sleep, etc., the number of urinations a day, the limits of the range of kidney functioning and the uniformity or irregularity of elimination of water and other substances. In health the curves from day to day always coincide at certain points, usually on rising, and at 10 a. m. After meals the kidneys work less at first and then resume their former activity. He suggests to accept 1 degree of specific gravity as the unit for renal functioning. The curve showing the amount of water parallels that of the specific gravity, except after ingestion of water or readily absorbed substances. After the critical elimination of this extra amount, the parallelism is resumed. It shows that the kidney in health always requires a given amount of water to eliminate a given amount of excrementitious substance, indicating harmony and co-ordination between the glomerular and canalicular apparatus. The lack of this parallelism in pathologic conditions is striking, and the way in which the curves crosa and recross, capriciously to all appearance. In one instance he

noted this erratic curve after the kidney affection had been clinically completely cured. He urges others to study the curves of renal functioning and endeavor to determine their precise significance.

1921½. **Effects of Palpation of Kidney.**—Morano concludes from his clinical experience corroborated by experimental research, that massage, or even palpation, has a directly injurious action on the kidney, especially if unusually accessible to the manipulations.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL APPLICATION OF THE ROENTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS. By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B.S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York. Cloth. Pp. 591. With 180 Illustrations. Nearly all Clinical. Price, $4.50 Net. Philadelphia: W. B. Saunders & Co. 1903.

PROGRESSIVE MEDICINE. Fifth Annual Series. Vol. II, June, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Cloth. Pp. 427. With 46 Illustrations. Price, Per Volume, $2.50. Per Annum, in Four Cloth-Bound Volumes, $10.00. Philadelphia and New York: Lea Brothers & Co.

REPORT OF STREAMS EXAMINATION, Chemic and Bacteriologic, of the Waters Between Lake Michigan at Chicago and the Mississippi River at St. Louis, for the Purpose of Determining the Sanitary Condition and Quality Before and After the Opening of the Drainage Channel. Made Under the Direction of Arthur R. Reynolds, M.D., Commissioner of Health, City of Chicago. Pasteboard. Chicago: Blakely Printing Company. December, 1902.

PHYSIOLOGICAL ASPECTS OF THE LIQUOR PROBLEM. Investigations Made by and Under the Direction of W. O. Atwater, John S. Billings, H. P. Bowditch, R. H. Chittenden and W. H. Welch. Sub-Committee of the Committee of Fifty to Investigate the Liquor Problem. Vols. I and II. Cloth. Pp. 396 and 379 Respectively. Price, $4.50 Net Per Set. Boston and New York: Houghton, Mifflin & Co. 1903.

A TEXT-BOOK OF CHEMISTRY. For Students of Medicine, Pharmacy and Dentistry. By Edward Curtis Hill, M.S., M.D., Medical Analyst and Microscopist; Professor of Chemistry and Metallurgy in the Colorado College of Dental Surgery. With 78 Illustrations, Including 9 Full-page Halftone Colored Plates. Pp. xii-523. Cloth. Price, $3.00 Net. Philadelphia: F. A. Davis Company.

POSTMORTEM PATHOLOGY. A Manual of Postmortem Examinations and the Interpretations to Be Drawn Therefrom. A Practical Treatise for Students and Practitioners. By Henry W. Cattell, A.M., M.D., Pathologist to the Philadelphia Hospital. With 162 Illustrations. Cloth. Pp. 372. Price, $3.00. Philadelphia and London: J. B. Lippincott Co. 1903.

JAHRESBERICHT über die Fortschritte in der Lehre von den Pathogenen Mikro-organismen unfassend Bacterien, Pilze und Protozoen unter Mitwirkung von Fachgenossen bearbeitet und herausgegeben von Dr. med. P. von Baumgarten, und Dr. med. F. Tangl. Siebzehnter Jahrgang, 1901. Erste Abtheilung. Paper. Pp. 560. Leipzig: Verlag von S. Hirzel. 1903.

ANALYSIS OF THE SEXUAL IMPULSE—LOVE AND PAIN—THE SEXUAL IMPULSE IN WOMEN. Third Volume in Series. "Studies in the Psychology of Sex." By Havelock Ellis, L.S.A. (England); Fellow of the Medicolegal Society of New York and Anthropological Society of Berlin. Cloth. Pp. 266. Price, $2.00 Net. Philadelphia: F. A. Davis Company.

A TEXT-BOOK OF MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. Stevens, A.M., M.D., Lecturer on Physical Diagnosis in the University of Pennsylvania. Third Edition. Thoroughly Rewritten and Reset. Cloth. Pp. 663. Price, $3.50 Net. Philadelphia: W. B. Saunders & Co. 1903.

OCULAR THERAPEUTICS, According to the Most Recent Discoveries. By Dr. A. Darier. Translated by Sydney Stephenson, M.B., C.M., Honorary Secretary to the Ophthalmologic Society of the United States. Cloth. Pp. 278. Price, $3.00 Net. Philadelphia: P. Blakiston's Son & Co. 1903.

THE EXPECTANT MOTHER. A Treatise of the Care of the Expectant Mother During Pregnancy and Child-Birth and the Care of the Child from Birth to Puberty. By W. Lewis Howe, M.D. Cloth. Pp. viii-63. Price, $0.50 Net. Philadelphia: F. A. Davis Company.

SURGICAL ASEPSIS. Especially Adapted to Operations in the Home of the Patient. By Henry R. Palmer, M.D., Consulting Surgeon to the Central Maine General Hospital. 90 Illustrations. Cloth. Pp. vi-231. Price, $1.25 Net. Philadelphia: F. A. Davis Company.

THIRTY-NINTH ANNUAL REPORT OF THE TRUSTEES OF THE BOSTON CITY HOSPITAL, Including the Report of the Superintendent for the Thirty-ninth Year, Feb. 1, 1902, to Jan. 31, 1903, Inclusive. Paper. Pp. 190. Boston: Municipal Printing Office. 1903.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Second Series. Volume VII. Hernia Inquiry. Cloth. Pp. 1,003. Washington: Government Printing Office. 1902.

DISEASE OF THE PANCREAS, Its Cause and Nature. By Eugene L. Opie, M.D., Associate in Pathology in the Johns Hopkins University. Cloth. Pp. 359. Price, $3.00. Philadelphia and London: J. B. Lippincott Company. 1903.

TWENTY-SECOND ANNUAL REPORT OF THE STATE DEPARTMENT OF HEALTH OF NEW YORK. With Maps. For the Year Ending Dec. 31, 1901. Cloth. Pp. 632. Albany: J. B. Lyon Company. 1902.

THE BUCKEYE DOCTOR. A Tale for Physicians and for Physicians' Patients. By William W. Pennell, M.D. Cloth. Pp. 345. Price, $1.50. New York: The Grafton Press.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. A., under orders from the Adjutant-General's Office, Washington, D. C., for the two weeks ending June 13, 1903:

Appel, Daniel M., major surgeon, now at San Francisco, will proceed to Denver and report to the commanding general, Department of the Colorado, for further orders.

Chaffee, Jerome S., first lieut. and asst.-surgeon, is granted leave of absence, to include July 1, 1903, to take effect on his relief from duty at Fort Porter. The resignation of the above has been accepted, to take effect July 1, 1903.

Collins, G. L., first lieut. and asst.-surgeon, is granted leave for ten days from about June 14.

Daywalt, George W., contract surgeon, will, on the arrival at Fort Schuyler of Asst.-Surgeon Charles N. Barney, proceed to the artillery, District of Portland, and report to the district commander at Fort Preble for temporary duty at Fort Levett. When his services are no longer required in connection with the Army and Navy maneuvers he will, when relieved by the district commander, return to his station.

De Witt, Wallace, first lieut. and asst.-surgeon, now under treatment and observation at Fort McPherson, will proceed to Fort Porter for duty, to relieve First Lieut. Jerome S. Chaffee.

Duval, Douglas F., first lieut. and asst.-surgeon, is granted two months' leave of absence on surgeon's certificate.

Gregory, William G., contract surgeon, is relieved from further duty in the Division of the Philippines and, on the expiration of his present sick leave, will proceed to Fort Apache for duty.

Hart, James W., contract surgeon, will proceed from Fort Washington to the artillery, District of Portland, and report to the district commander for assignment to a station where his services may be needed. At the close of the maneuvers he will return to Fort Washington with the Thirty-seventh company.

Juenemann, George F., contract surgeon, now in Washington, D. C., will proceed to Fort Columbus for duty.

Pease, Louis W., contract surgeon, is granted an extension of one month's leave on surgeon's certificate.

Roberts, D. M., contract surgeon, is granted an extension of leave for two months.

Whitcomb, Clement C., first lieut. and asst.-surgeon, now at San Francisco, is relieved from further duty in the Division of the Philippines and will proceed to Governor's Island, N. Y., and report to the commanding general, Department of the East, for assignment to duty pertaining to the Army and Navy maneuvers during the ensuing year.

Stedman, Chester J., contract surgeon, now in Washington, D. C., will proceed to Fort Adams for duty.

Navy Changes.

Changes in the Medical Corps of the Navy for the two weeks ended June 20:

Surgeon L. W. Spratling, detached from the Navy Yard, New York, and ordered to the *Columbia*.

Surgeon P. Leach, detached from the *Columbia* and ordered to the *Massachusetts*.

A. A. Surgeon W. H. Block, detached from the Naval Recruiting Station, Chicago, and ordered to Navy Yard, New York.

Surgeon J. M. Steele, detached from the *Massachusetts* and granted leave for six months.

Surgeons Means, Cordeiro, Wieber, Norton, Kite, Wentworth, Decker, Berryhill, Stone, Pickrell, Crandall, Harris, Urie, McCormick, Arnold, Wilson, Stokes, Stitt, Gates, Lowndes, Barber, Rothganger, Smith, Lung, Von Wedekind, Bogert, Spratling, Kennedy, Blackwood, Calculated and Evans, commissioned surgeons, with rank of lieut.-commander, from March 3.

P. A. Surgeons Orvis, Kerr, Grow, Grunwell, Langhorne, Thompson, Benton, Garton, McCullough, Furlong, Angeney, Bell, Curl, Holcomb, Parker, Wright, Plummer, Odell and Taylor, commissioned passed asst.-surgeons, with rank of lieutenant, from March 3.

P. A. Surgeon D. H. Morgan, detached from the *Boston* and ordered to Naval Hospital, Mare Island, for treatment.

Drs. W. H. Reunle, W. W. Werner, O. Kohlhase and P. S. Rossiter, appointed asst.-surgeons from May 25.

Drs. W. B. Smith and W. S. Hoen, appointed asst.-surgeons from June 2.

Medical Director C. U. Gravatt, retired on account of disability incurred in active service.

Medical Director F. Anderson, detached from the *Alabama* and ordered to the *Brooklyn*.

Surgeon J. C. Byrnes, ordered to the *Texas*.

Surgeon C. J. Decker, ordered to the *Alabama*.

Surgeon C. F. Stokes, ordered to the Navy Yard, League Island, Pa.

Surgeon G. Pickrell, detached from the *Texas* and ordered to the *Iowa*.

P. A. Surgeon R. K. Smith, detached from the *Independence* and ordered to duty at the Naval and Marine Recruiting Stations, San Francisco.

P. A. Surgeon C. P. Kindelberger, detached from the *Iowa* and ordered home to await orders.

P. A. Surgeon A. Farenholt, detached from the *Boston* and ordered to the *Concord*.

Asst.-Surgeon M. K. Elmer, detached from the *Ranger* and ordered to the *Independence*.

Pharmacist W. H. Huntington, retired from active service on account of disability incident to service.

Medical Director J. B. Parker, retired from active service from June 20, under provisions of Section 1454, R. S.

Medical Inspector F. Anderson, commissioned medical inspector from January 31.

P. A. Surgeon J. S. Taylor, commissioned past asst.-surgeon from Nov. 8, 1902.

Drs. J. D. Manchester, P. T. Dessez and J. S. Woodward, appointed asst.-surgeons from June 10.

Medical Inspector S. H. Dickson, ordered home to wait orders.

P. A. Surgeon L. Morris, detached from the *Puritan* and ordered to the *Florida*.

A. A. Surgeon W. P. Keene, detached from the *Truxtun* and ordered to duty with the second torpedo flotilla.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the fourteen days ended June 18, 1903:

Surgeon D. A. Carmichael, leave of absence for seventeen days from May 19 granted by Bureau letter of May 9, amended so that it shall be for thirteen days only.

P. A. Surgeon J. M. Eager, granted leave of absence for two months from August 1.

P. A. Surgeon C. H. Gardner, granted leave of absence for seven days.

P. A. Surgeon H. B. Parker, directed to report at Washington, D. C., for temporary duty.

Asst.-Surgeon C. W. Vogel, granted leave of absence for one month from June 8.

Asst.-Surgeon B. J. Lloyd, to report to P. A. Surgeon R. Blue, Plague Laboratory, San Francisco, for temporary duty.

A. A. Surgeon J. E. Bready, granted leave of absence for three days.

A. A. Surgeon A. P. McConnell, granted leave of absence for two days from June 10.

A. A. Surgeon W. C. Mason, granted leave of absence for ten days from June 17.

A. A. Surgeon J. C. Rodman, granted leave of absence for thirty days from June 20.

A. A. Surgeon W. S. Walkley, granted leave of absence for seven days from June 11.

Pharmacist G. C. Allen, granted extension of leave of absence for twenty-three days from June 5.

Assistant Surgeon-General A. H. Glennan, detailed as assistant surgeon-general in charge of the Domestic Quarantine Division in the Bureau of Public Health and Marine-Hospital Service.

Surgeon J. B. Stoner, granted leave of absence for one month from June 30.

P. A. Surgeon M. J. Rosenau, to proceed to Greenpoint, N. Y., for special temporary duty.

P. A. Surgeon J. A. Nydegger, relieved from duty at Cincinnati and directed to proceed to Sault Ste. Marie, Mich., as inspector of immigrants.

P. A. Surgeon E. K. Sprague, granted leave of absence for seven days from June 4, under Paragraph 191 of the regulations.

P. A. Surgeon S. B. Grubbs, Bureau telegram of May 13, 1903, granting P. A. Surgeon Grubbs leave of absence for one month, amended so that said leave shall be for one month from May 23.

Asst.-Surgeon C. E. Decker, granted extension of leave of absence, on account of sickness, for twenty-two days from June 9.

Asst.-Surgeon C. E. D. Lord, relieved from duty at Galveston, Texas, and directed to report to medical officer in command at San Francisco Quarantine for assignment to special duty.

A. A. Surgeon H. C. Sibree, granted leave of absence for six days from June 16.

Pharmacist C. G. Carlton, granted leave of absence for thirty days from June 1.

BOARDS CONVENED.

Board convened for the examination of Asst.-Surgeon M. K. Gwyn to determine his fitness for promotion to the grade of passed assistant-surgeon. Detail for the board: Assistant Surgeon-General L. L. Williams, chairman; Assistant Surgeon-General W. J. Pettus; Asst.-Surgeon V. G. Heiser, recorder.

Board convened for the examination of Asst.-Surgeon W. C. Hobby to determine his fitness for promotion to the grade of passed assistant-surgeon. Detail for the board: Assistant Surgeon-General L. L. Williams, chairman; Assistant Surgeon-General W. J. Pettus; P. A. Surgeon L. E. Cofer, recorder.

Board convened at San Francisco, June 8, for the physical re-examination of an officer of the Revenue Cutter Service. Detail for the board: Asst.-Surgeon Carl Ramus, chairman; Asst.-Surgeon C. W. Vogel, recorder.

Board convened at Washington, D. C., June 10, to review testimony and make recommendation in case of Asst. Surgeon P. J. Thornbury. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Surgeon H. W. Sawtelle; Surgeon D. A. Carmichael, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the two weeks ended June 20, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 30-June 3, 3 cases.

California: Fresno, May 1-31, 13 cases; Los Angeles, May 23-June 6, 5 cases; San Francisco, May 24-June 7, 5 cases.

Colorado: Denver, May 2-23, 70 cases.

Connecticut: Stamford, May 1-31, 1 case.

Florida: Baker County, June 6-13, 1 case; Columbia County, May 23-30, 1 case; Duval County, May 23-June 13, 7 cases; Escambia County, Pensacola, May 23-June 13, 3 cases; Leon County, May 23-30, 5 cases; Levy County, June 6-13, 10 cases.

Georgia: Atlanta, May 28-June 3, 2 cases.

Illinois: Belleville, June 6-13, 3 cases, 1 death; Chicago, May 31-June 6, 12 cases; Danville, May 31-June 6, 1 case.

Indiana: Evansville, June 6-13, 2 cases; Indianapolis, May 31-June 6, 2 cases.

Iowa: Des Moines, May 31-June 6, 1 case.

Louisiana: New Orleans, May 31-June 13, 5 cases.

Maine: Rockport, June 3, 1 case.

Maryland: Baltimore, May 30-June 6, 1 case.

Massachusetts: Fall River, May 30-June 6, 9 cases; Holyoke, May 31-June 6, 2 cases.

Michigan: Detroit, May 28-June 13, 28 cases, 1 death; Flint, May 23-June 13, 3 cases; Grand Rapids, May 28-June 13, 7 cases; Port Huron, June 1-13, 2 cases.

Minnesota: Winona, May 30-June 13, 2 cases, 1 death.

Nebraska: Omaha, May 29-June 6, 3 cases.

New Hampshire: Nashua, May 29-June 13, 16 cases.

New York: New York, May 29-June 6, 1 case; Rochester, May 24-June 7, 3 deaths.

Ohio: Cincinnati, May 28-June 13, 7 cases, 1 death; Cleveland, May 30-June 6, 5 cases; Dayton, June 6-13, 6 cases; Hamilton, May 30-June 13, 2 cases; Toledo, May 16-30, 8 cases.

Pennsylvania: Altoona, May 29-June 6, 3 cases; Erie, May 29-June 6, 1 case; Johnstown, May 29-June 6, 1 case; McKeesport, May 29-June 13, 4 cases, 1 death; Philadelphia, May 29-June 6, 31 cases, 4 deaths; Pittsburg, May 29-June 6, 9 cases, 6 deaths.

Rhode Island: Warwick, June 8-15, 4 cases.

South Carolina: Charleston, May 28-June 13, 6 cases.

Tennessee: Memphis, May 23-June 6, 6 cases; Nashville, May 23-30, 1 case.

Texas: San Antonio, May 1-31, 2 cases.

Utah: Salt Lake City, May 31-June 6, 23 cases.

Wisconsin: Milwaukee, May 23-June 13, 70 cases.

SMALLPOX—INSULAR.

Hawaii: Honolulu, May 7, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, May 16-23, 4 cases.

Belgium: Antwerp, May 16-23, 6 cases; Brussels, May 16-23, 8 deaths.

Brazil: Rio de Janeiro, May 3-10, 5 deaths.

Canada: Amherst, N. S., June 12, 3 cases; Fredericton, N. B., June 12, 5 cases.

Canary Islands: Las Palmas, May 9-16, 18 cases.

China: Hongkong, April 11-25, 2 deaths; Shanghai, April 24-May 2, 3 deaths.

Colombia: Barranquilla, May 17-31, 1 case, 1 death; Bocas del Toro, May 19-June 2, epidemic.

France: Paris, May 8-30, 3 deaths.

Great Britain: Birmingham, May 23-30, 7 cases; Bradford, March 30-May 30, 190 cases, 5 deaths; Bristol, May 23-30, 1 case; Dublin, May 16-30, 26 cases, 4 deaths; Dundee, May 8-16 and 23-30, 10 cases; Leeds, May 23-30, 21 cases, 3 deaths; Liverpool, May 16-30, 82 cases, 10 deaths; London, May 16-30, 29 cases; Manchester, May 16-23, 14 cases; Newcastle-on-Tyne, May 8-16 and 23-30, 4 cases, 1 death; Nottingham, May 16-23, 2 cases; Sheffield, May 8-16 and 23-30, 5 cases; South Shields, May 8-16 and 23-30, 2 cases; Sunderland, May 23-30, 1 case; West Hartlepool, May 16-23, 2 cases.

India: Bombay, May 5-19, 111 deaths; Calcutta, April 11-18, May 2-16, 6 deaths.

Japan: Kobe, April 25-May 2, 6 cases.

Mexico: City of Mexico, May 17-31, 31 cases, 13 deaths.

Russia: Moscow, May 8-23, 8 cases, 2 deaths; Odessa, May 16-30, 4 cases, 1 death; St. Petersburg, April 25-May 30, 1174 cases, 24 deaths; Warsaw, April 18-May 16, 10 deaths.

Straits Settlement: Singapore, April 18-May 2, 1 death.

YELLOW FEVER.

Brazil: Rio de Janeiro, May 3-10, 8 cases.

Colombia: Panama, May 18-June 1, 10 cases, 6 deaths.

Costa Rica: Limon, May 21-June 4, 7 cases, 3 deaths.

Mexico: Coatzacoalcos, May 23-30, 1 case, 1 death; Progreso, June 3, 1 case; Tampico, May 23-June 8, 34 cases, 14 deaths; Vera Cruz, May 23-June 6, 42 cases, 12 deaths.

CHOLERA—INSULAR.

Philippines: Manila, April 11-May 2, 52 cases, 47 deaths; Provinces, April 11-May 2, 1,342 cases, 729 deaths; not previously reported, 81 cases, 79 deaths.

CHOLERA—FOREIGN.

China: Canton, May 8, 50 deaths; Hongkong, May 1-8, 2 cases.

India: Bombay, May 5-19, 1 death; Calcutta, April 11-18, May 2-16, 254 deaths.

Turkey: Dasmascus, March 29-April 16, to May 15, 94 cases, 117 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, June 5, 1 death.

PLAGUE—FOREIGN.

Africa: East London, April 12-25, 2 cases; King Williams Town, April 12-25, 5 cases; Port Elizabeth, April 12-25, 15 cases.

China: Hongkong, April 11-25 and May 1-8, 225 cases, 202 deaths.

India: Bombay, April 11-18 and May 5-19, 740 deaths; Calcutta, April 11-18 and May 2-16, 758 deaths; Karachi, May 3-17, 332 cases, 202 deaths.

Japan: Yokohama, May 8-16, 2 deaths.

Peru: Callao, May 3-12, 10 cases, 6 deaths.

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